TOSHIBA

OWNER'S MANUAL

COLOR TELEVISION

CF27C50
CF30C50
CF32C50

Dear Customer

Congratulations! You have purchased one of the finest Color TV's on the market!
This manual will help you use the many exciting and useful features to make your TV viewing more enjoyable than ever before.
Before operating your TV set, please read all these safety and operating instructions completely and then retain for future reference.

Customer's Record

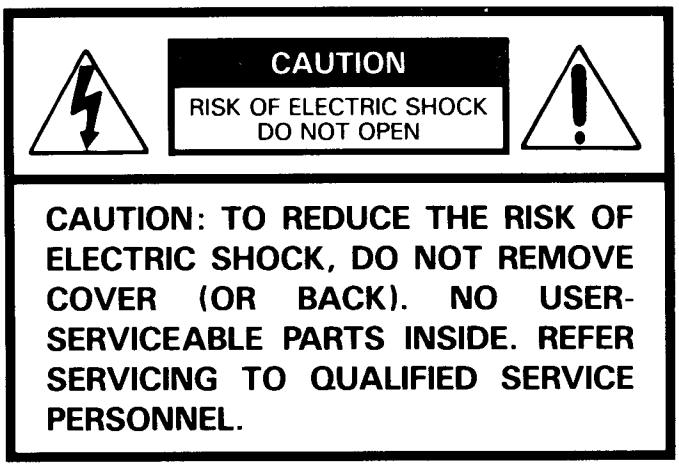
You will find the model number and serial number on the back of your TV set.
Record these numbers in the spaces provided below. Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

Model Number _____

Serial Number _____

SAFETY PRECAUTIONS

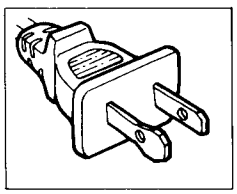
WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock. DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.

The exclamation point in the triangle tells you that important operating and maintenance instructions follow this symbol.

CAUTION:
As a safety feature, the AC plug has one prong wider than the other. It will fit only one way into a standard electrical outlet. If the plug will not fit into the outlet, try turning it around. If the plug will not fit either way, the outlet is probably old and non-standard. You will need to have a new outlet installed by an electrician.



DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.

CAUTION:
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE PRONGS CAN BE FULLY INSERTED INTO THE OUTLET TO PREVENT ANY EXPOSURE OF THE PRONGS ON THE POLARIZED PLUG.

CAUTION:
This TV set may be used only with TOSHIBA stand shown on page 4. Use with other stands may result in instability causing possible injury.

NOTE TO CATV SYSTEM INSTALLER:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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IDENTIFY YOUR TV SET

This manual applies to models CF27C50, CF30C50 and CF32C50 and there are slight differences among them.

1. Please check the model number of your TV set.
2. Please check the table below to see what is equipped with your TV set.
3. Please begin the operation.

DIFFERENCE TABLE

Item \ Model		CF27C50	CF30C50	CF32C50
Shape	Overview	pages 10—11	peges 10—11	pages 10—11
	Front controls view	page 23	page 23	page 23
Sub-Bass System function		Not equipped	Not equipped	Equipped
EXTERNAL SPEAKER terminals		Not equipped	Not equipped	Equipped
Remote Control type		CT-9670 (w/o CYC/SBS button)	CT-9670 (w/o CYC/SBS button)	CT-9669 (w/CYC/SBS button)
Optional TV stand		ST276	ST307	ST324

In this manual, the instructions are given using the model with maximum functions.

INSTALLING YOUR TV SET

WARNING: Do not place the TV on an uneven floor or on an unstable stand. The set may overturn, causing serious injury to you or your children. Take care that your children do not get on the TV or hang on to it.

DO NOT:

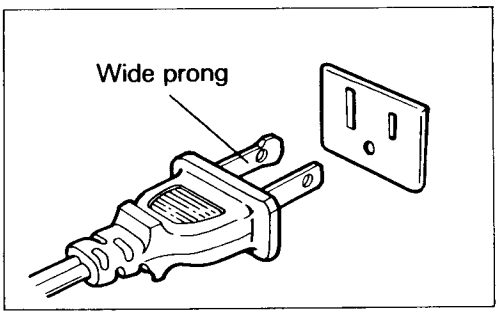
- Place your TV set in a room where direct lighting strikes the screen.
- Place your TV set too close to a wall, in a confined area or in a very warm location.
- Change the plug's safety prong.

DO:

- Use soft and indirect lighting.
- Sit at least 6 feet away from the set.
- Provide normal air circulation for reliable long life.
- Plug into an electrical outlet with standard house power. (120 volt AC, 60Hz)

To Insert the Plug

As a safety feature, the plug has one prong wider than the other. It will fit only one way into an outlet.
DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.



Safety Notes

Should any liquid or solid object fall into the cabinet, unplug the TV and have it checked by qualified personnel before operating it any further.

ANTENNA/CABLE TV GENERAL INFORMATION

You can use either an indoor or outdoor antenna to receive VHF and/or UHF channels.
Channels 2-13 are VHF channels, and channels 14-69 are UHF channels.
We recommend using an outdoor antenna for better picture quality.
You can receive Cable TV by connecting a cable supplied by your local cable company.
Cable TV delivers both VHF and UHF channels and other channels not available from your antenna.

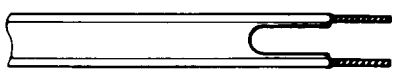
TYPES OF ANTENNA CABLES

Shown below are two basic types of antenna cables. Signals from a home antenna may be conducted through either type. Cable TV signals will always be conducted through 75 ohm coaxial cable.

1. A 75 ohm system is generally a round cable with F-type connectors that can easily be attached to a terminal without tools.

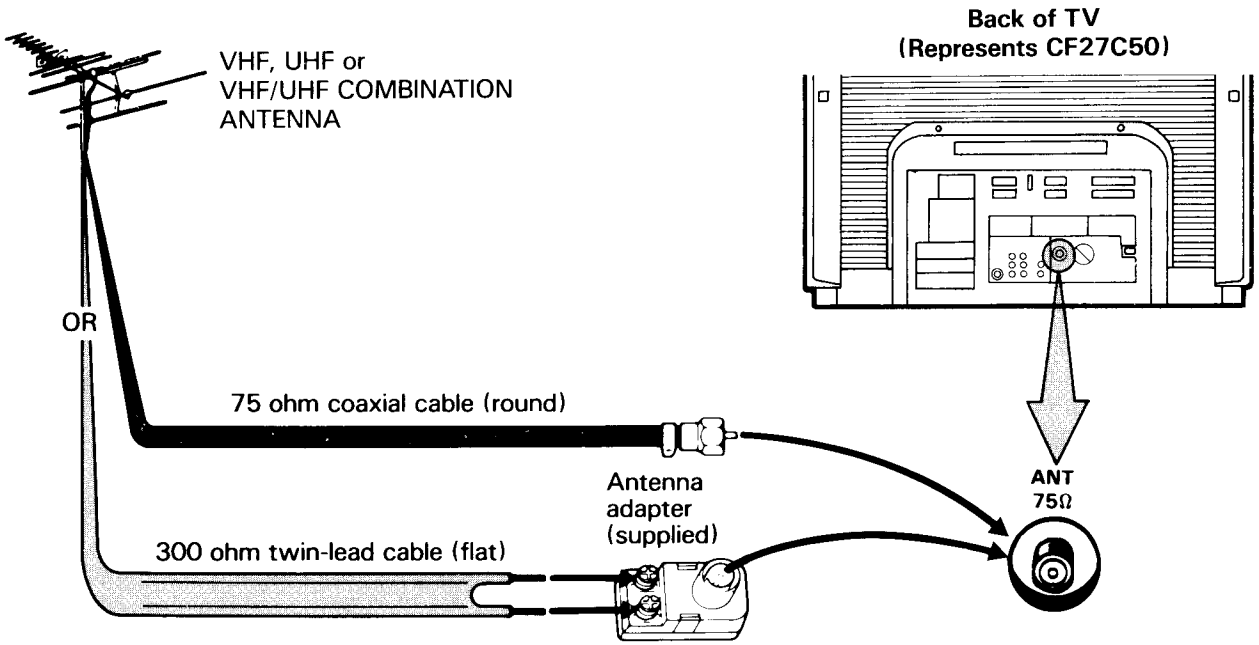
2. A 300 ohm system is a flat "twin-lead" cable that can be attached to a terminal through an antenna adapter supplied as an accessory.

Optional F-type connector

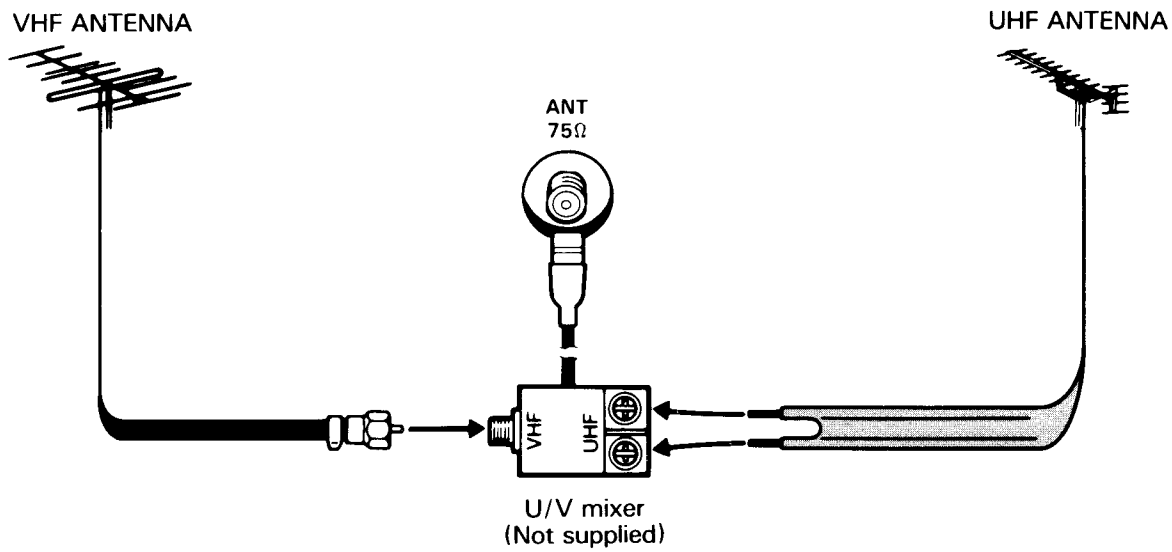


HOME ANTENNA CONNECTION

Connecting a single lead-in cable



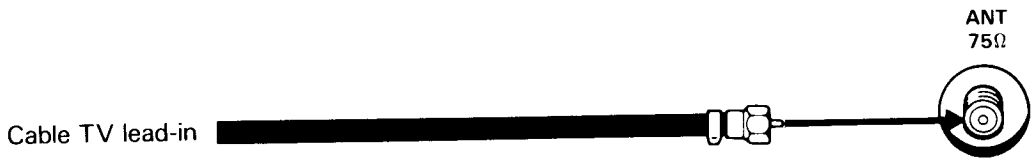
Connecting both VHF and UHF lead-in cables



CABLE TV CONNECTION

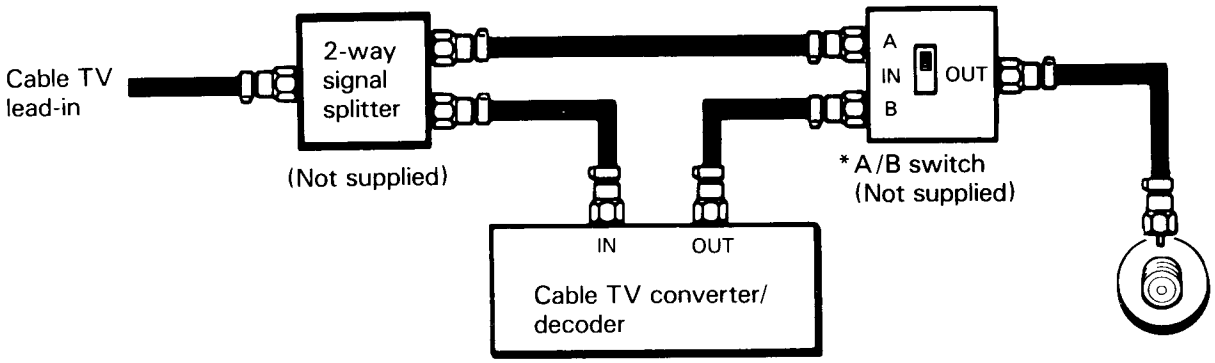
Generally, the incoming cable for a Cable TV system can be connected directly to the TV antenna terminal just like a home antenna connection. Simply attach it to the ANT (75Ω) terminal. You will be able to receive unscrambled cable channels.

Cable without a decoder box (Unscrambled channels)



Some cable companies offer "premium pay channels". Since the signals of these premium pay channels are scrambled, a cable TV converter/decoder is generally provided to the subscriber by the cable TV company. This decoder box is necessary for normal viewing of the scrambled channels. For more specific instructions on installing cable TV, consult your cable TV company.

Cable with a decoder box (Scrambled channels)



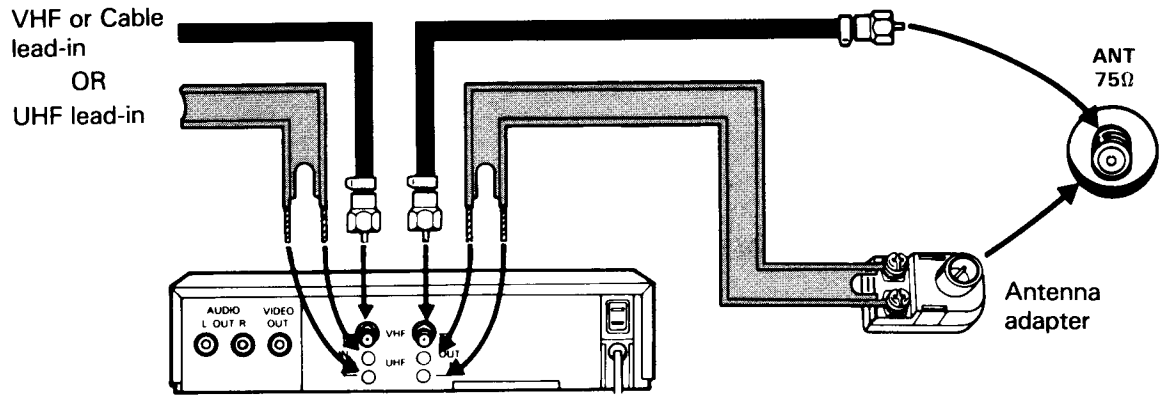
* "A" position on the A/B switch allows you to select unscrambled channels using the TV's channel keys. "B" position allows you to select scrambled channels via the converter/decoder box using the converter's channel keys. Place your TV on channel 3 or 4 to match the converter's output channel.

Notes:

- The descrambler device may or may not be a part of the cable converter.
- Since cable systems vary, you may wish to consult your local cable company for additional information.

ANTENNA/CABLE TV AND VCR CONNECTIONS

Antenna/Cable connection via VCR (simplified method)

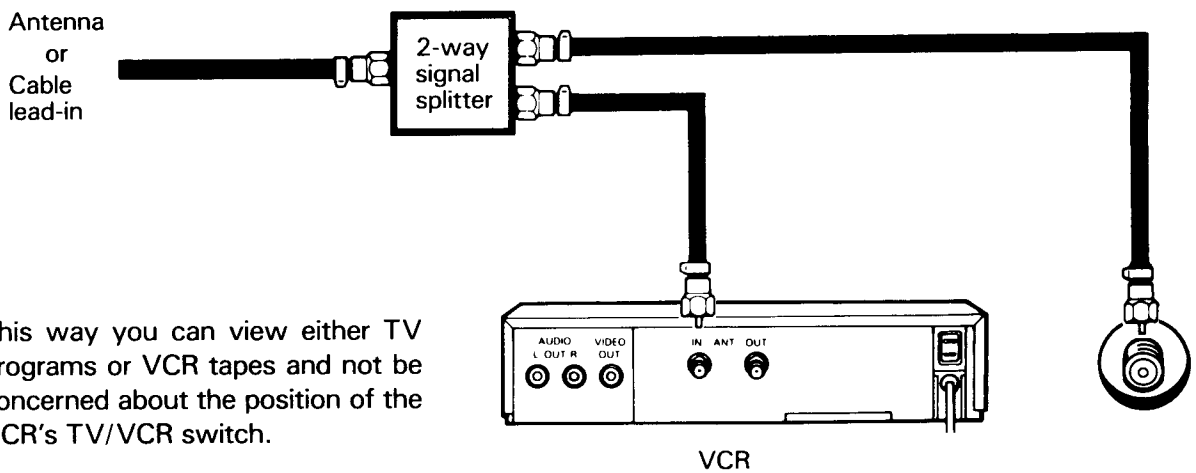


Cable-ready VCR (U/V separated)

Notes:

- On many VCR's, playback of tapes causes the TV/VCR switching to disconnect the antenna signals from the TV. If you cannot select a certain channel, try pressing the TV/VCR button on the Remote Control.
- If you connect both VHF and UHF lead-in cables, use an optional U/V mixer. See page 6.

Using a 2-way signal splitter

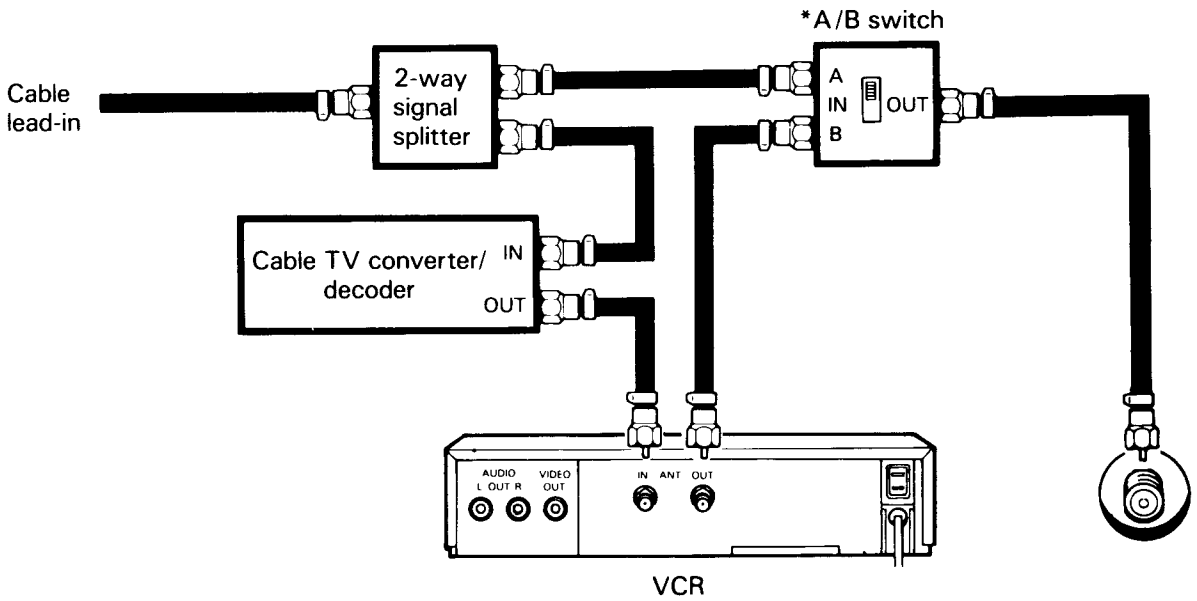


This way you can view either TV programs or VCR tapes and not be concerned about the position of the VCR's TV/VCR switch.

VCR

Note: When connected either way, the VIDEO/AUDIO connections from the VCR to the TV are required for PIP (Picture in Picture) viewing and for (stereo) playback from VCR's. See page 29 for connection details.

Cable with a converter/decoder box (Scrambled channels)

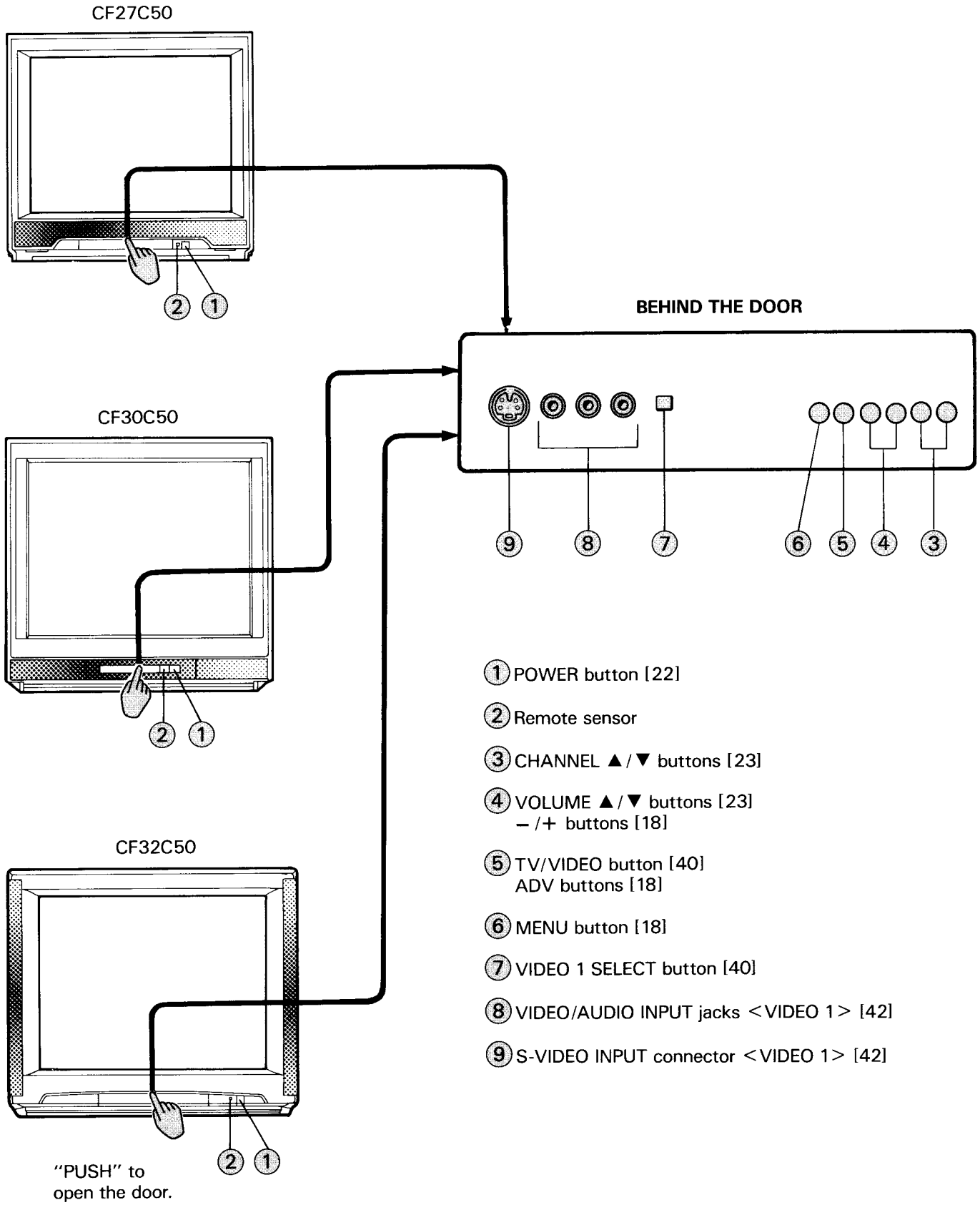


* "A" position on the A/B switch allows you to select unscrambled channels using the TV's channel keys. "B" position on the A/B switch allows you to select scrambled channels via the cable TV converter/decoder using the converter's channel keys. Place your TV and VCR on channel 3 or 4 to match the converter's output channel.

Note: When connected this way, the VIDEO/AUDIO connections from the VCR to the TV are required for PIP (Picture in Picture) viewing and for stereo playback from stereo VCR's. See page 29 for connection details.

LOCATION OF CONTROLS (TV set)

For specific use of each control, consult the corresponding page numbers in brackets.



① POWER button [22]

② Remote sensor

③ CHANNEL ▲/▼ buttons [23]

④ VOLUME ▲/▼ buttons [23]
– /+ buttons [18]

⑤ TV/VIDEO button [40]
ADV buttons [18]

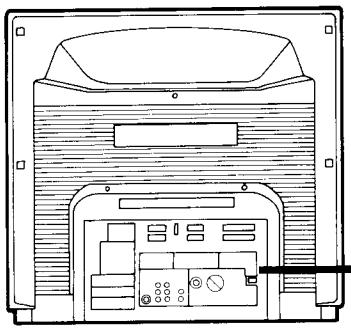
⑥ MENU button [18]

⑦ VIDEO 1 SELECT button [40]

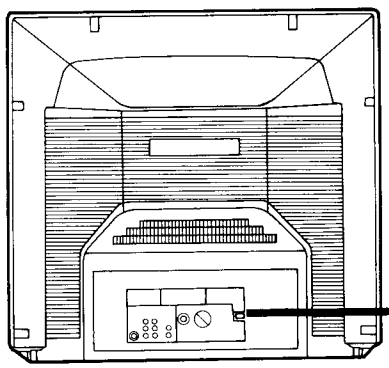
⑧ VIDEO/AUDIO INPUT jacks <VIDEO 1> [42]

⑨ S-VIDEO INPUT connector <VIDEO 1> [42]

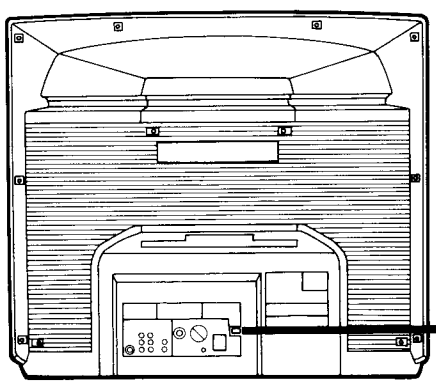
CF27C50



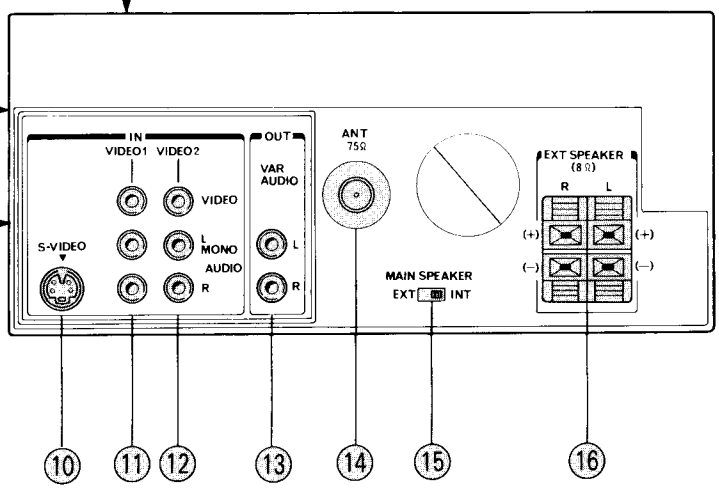
CF30C50



CF32C50



REAR VIEW



⑩ S-VIDEO INPUT connector <VIDEO 1> [41]

⑪ VIDEO/AUDIO INPUT jacks <VIDEO 1> [40]

⑫ VIDEO/AUDIO INPUT jacks <VIDEO 2> [40]

⑬ VARIABLE AUDIO OUTPUT jacks [43]

⑭ ANTENNA/CABLE terminal [5-9]

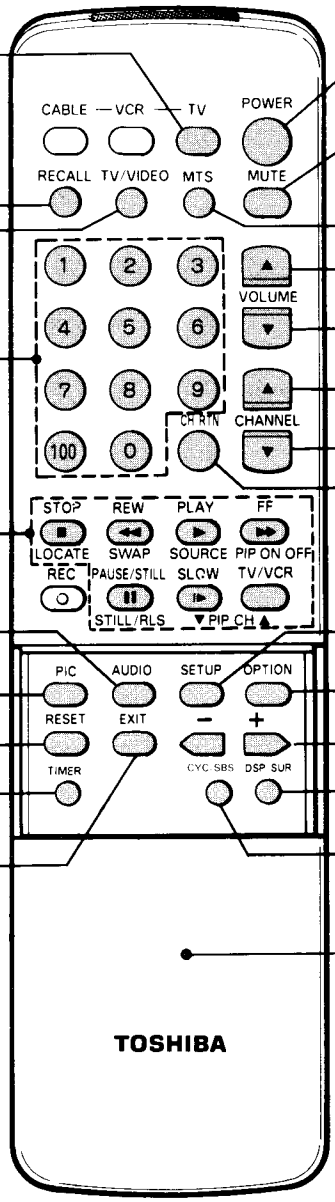
⑮ MAIN SPEAKER switch [44]
(Only for CF32C50)

⑯ EXTERNAL SPEAKER terminals [44]
(Only for CF32C50)

LOCATION OF CONTROLS (Remote Control)

Only the buttons that are used to operate the TV set are described here. The rest of the functions are used to operate VCR's (page 14), and Cable TV Converters (page 15).
For details on the specific operation of each control, refer to the corresponding page numbers in brackets.

Aim at the remote sensor on the TV set



*TV button
To operate your TV, first press this button.

*RECALL button [24]

TV/VIDEO button [40]

*CHANNEL NUMBER buttons [22]

*PIP selection buttons [30]

*AUDIO button [19]

*PIC (Picture) button [19]

*RESET button [33]

*TIMER button [25]

EXIT button [19]

POWER button [22]

*MUTE button [24]

*MTS button [26]

VOLUME ▲/▼ buttons [23]

CHANNEL ▲/▼ buttons [23]

*CH RTN button [24]

*SETUP button [19]

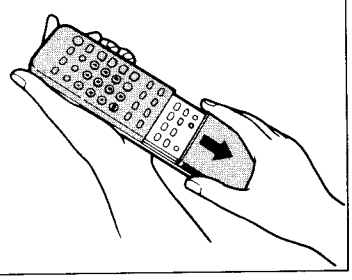
*OPTION button [19]

– /+ buttons [18]

*DSP/SUR button [27]

*CYC/SBS button [27]
(only for CF32C50)

To operate buttons inside the cover, slide the cover down and toward you.



* These functions do not have duplicate locations on the TV set. They can be controlled only by the Remote Control.

USING THE REMOTE CONTROL

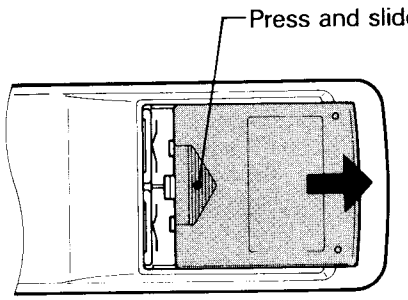
INTRODUCTIONS

This Remote Control allows you to operate your TV set and most models of remote-controlled VCR's and Cable TV Converters even if they are different brands. However, this Remote Control must be programmed to control other brands of VCR's and/or Converters. If you will be using your TV set with a TOSHIBA VCR, your remote has already been preprogrammed for you.

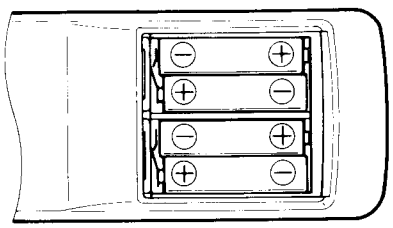
- Before attempting to operate your Remote Control, install the batteries according to the section "INSTALLING AND REPLACING BATTERIES" shown below.
- For more detailed instructions, see the section "PROGRAMMING THE REMOTE CONTROL" on page 16.

INSTALLING AND REPLACING BATTERIES

1. Place the Remote Control with the face down. Push down on the ridged area of the battery cover and slide it off.



2. Place the four "AAA" size batteries, matching the + and − signs on each battery to the + and − signs of the battery compartment.



3. Replace the battery cover until the lock snaps.

Note:

- After installing new batteries, the Remote Control will set itself to codes for TOSHIBA's TV and VCR. If you are using the Remote Control to operate equipment that uses different codes, it will have to be reprogrammed for those codes.
- This Remote Control may have functions not available on the original remote control. These functions may or may not operate your VCR or Cable TV Converter. Refer to the owner's manuals supplied with your equipment to see which functions are available.
- The remote control supplied with your VCR or Cable TV Converter may have keys not duplicated on this Remote Control. If these functions are desired, the original remote will have to be used.

TIPS FOR BEST OPERATION

- For optimum performance, aim the Remote Control directly at the desired equipment and be sure there is no obstruction between the Remote Control and the equipment.
- If your Remote Control does not always adjust the set as you wish, you probably need to replace the batteries. See the directions at the left.
- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.
- If you do not intend to use the Remote Control for a long period, remove the batteries.

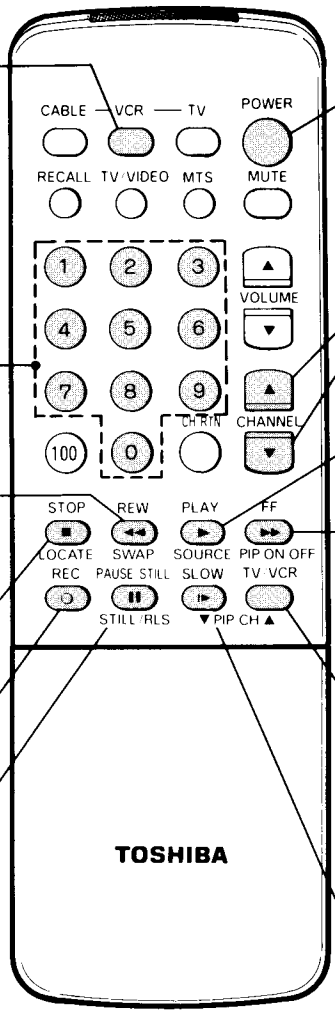
CAUTION:

- Do not throw your batteries into a fire. Dispose of your batteries in a designated disposal area.
- Do not combine used old batteries with new ones.
- Do not mix battery types.

USING THE REMOTE WITH VCR

- To control a TOSHIBA VCR, first press the VCR button to put the Remote in the "VCR mode". The buttons shown below will then control the VCR.
- If you have another brand of VCR, you can probably program your Remote to control it. Details are on page 16.

Aim at the VCR



VCR button
To operate your VCR, first press this button.

Numbered buttons (0—9)
Press the numbers desired for direct access.

REWind button
Press to rewind tapes.
In playback mode, press to view picture moving rapidly in reverse.

STOP button
Press to stop the tape.

RECord button
Press to start a recording.

PAUSE/STILL button
Press to freeze the picture during playback or recording.
Press again to release.

POWER button
Press the button to turn the VCR on.
Press again to turn off.

CHANNEL ▲/▼ buttons
Press ▲ button to scan up.
Press ▼ button to scan down.

PLAY button
Press to begin tape playback.

FF button
Press to rapidly advance the tape. In playback mode, press to view the picture moving rapidly in forward direction.

TV/VCR button
Press to the VCR mode to view the playback of a tape or to monitor a recording.
Press to the TV mode to view one program while recording another program.

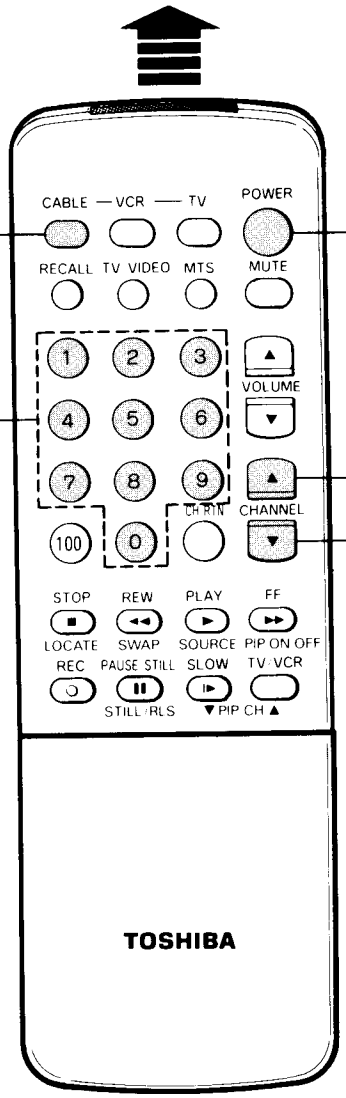
SLOW button
Press to view a slow-motion picture in the playback mode.

Note: The VOLUME ▲/▼ and MUTE buttons always control the TV set regardless of the CABLE, VCR or TV button position. When using these buttons, aim the Remote Control at the TV set.

USING THE REMOTE WITH CABLE TV CONVERTER

- To control a Cable TV converter, first press the CABLE button to put the Remote in the "CABLE mode".
- This Remote Control is designed to control several brands of Cable TV converter. If this Remote does not control your converter, you can probably also program your Remote to control it. Details are on page 16.

Aim at the Cable TV Converter



CABLE button
To operate your Cable converter, first press this button.

Numbered buttons (0—9)
Press the numbers desired for direct access.

POWER button
Press the button to turn the Cable converter on. Press again to turn off.

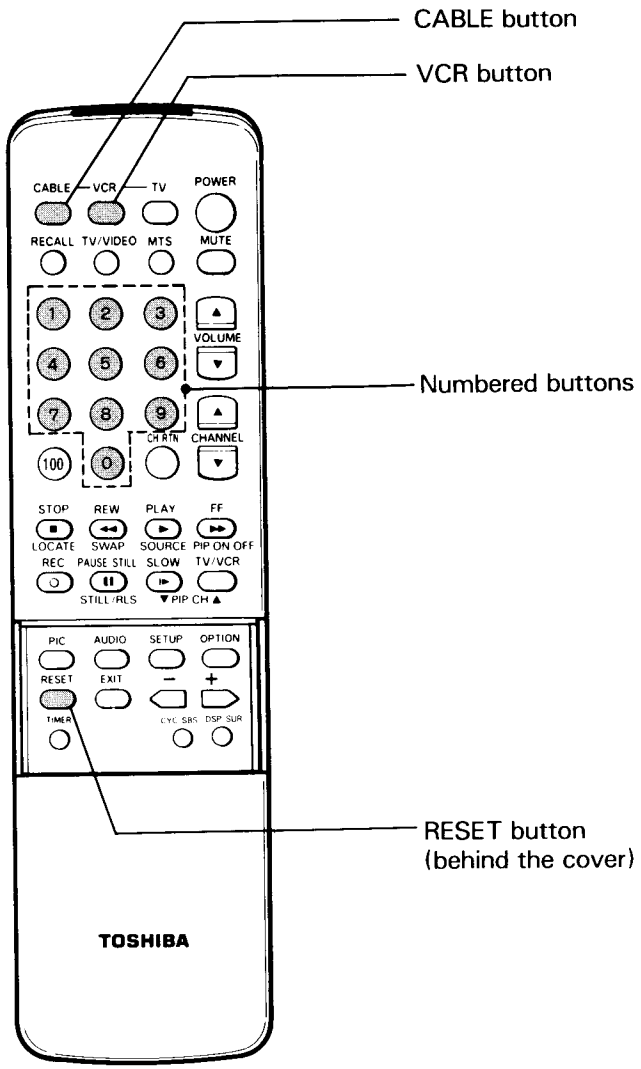
CHANNEL ▲/▼ buttons
Press ▲ button to select next higher channel.
Press ▼ button to select next lower channel.

Note: The VOLUME ▲/▼ and MUTE buttons always control the TV set regardless of the CABLE, VCR or TV button position. When using these buttons, aim the Remote Control at the TV set.
If your Cable TV converter has a volume control, adjust it for maximum volume level. Then adjust the volume using the VOLUME ▲/▼ buttons on this Remote.

PROGRAMMING THE REMOTE CONTROL

TO CONTROL OTHER BRANDS OF VCR'S AND CABLE TV CONVERTERS

Before using this Remote Control, it must be programmed to recognize the brands of the VCR and Cable TV Converter box it will be used to operate. If you are using a TOSHIBA [VHS] VCR, it has already been programmed for you. Otherwise, follow the steps below.



For future reference, write the code you used.

VCR CODE: _____

CABLE CODE: _____

TO CONTROL YOUR VCR

1 Refer to the "VCR CODE TABLE" on the next page to find the code number that corresponds to the brand name of your VCR.
Keep this number in mind.
If more than one number is listed, you may need to try each one separately until you find the one that works.

2 Press the VCR button.

3 Press the RESET button.

4 Press two number buttons (within three seconds of pressing the RESET button) to enter the code number for your brand of VCR.

5 Point the Remote at the VCR and press the POWER button to test the code number.
- If the right number was entered, the VCR should turn on.
- If the VCR does not respond to the Remote Control, repeat steps 1 thru 5 with another code number.

TO CONTROL YOUR CABLE TV CONVERTER

1 Refer to the "CABLE TV CONVERTER CODE TABLE" on the next page to find the code number that corresponds to the brand name of your converter.

2 Press the CABLE button.

3 Press the RESET button.

4 Press two number buttons (within three seconds of pressing the RESET button) to enter the code number for your brand of converter.

5 Point the Remote at the converter and press the POWER button to test the code number.
If the converter does not respond to the Remote Control repeat steps 1 thru 5 with another code number.

Note: You may have to reprogram the Remote Control if you change its batteries.

VCR CODE TABLE

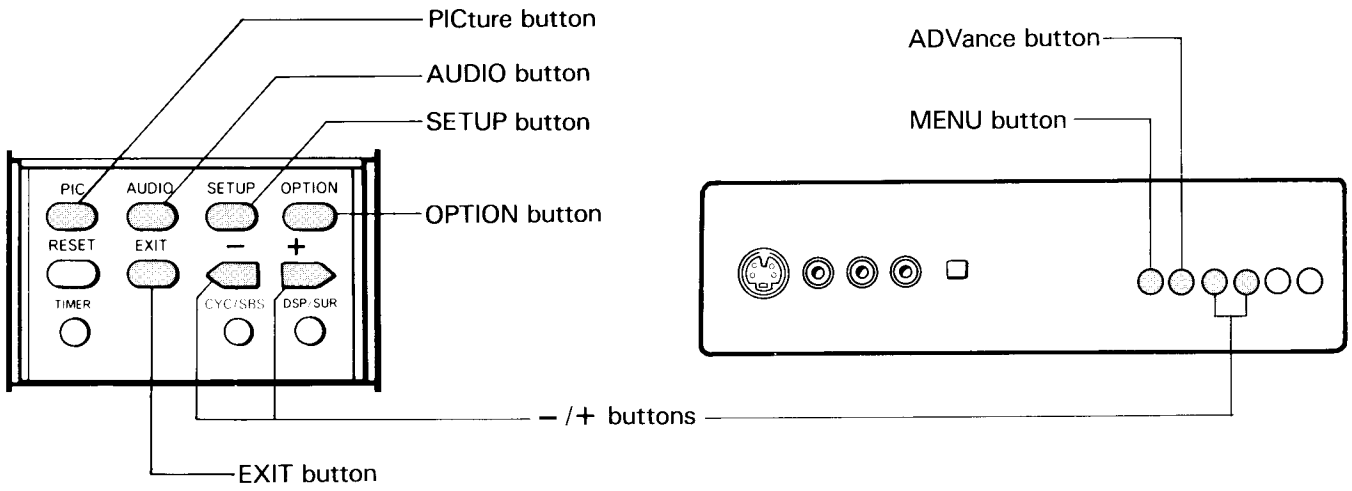
BRAND NAME	CODE NUMBER	BRAND NAME	CODE NUMBER
AIWA	15	NEC	02, 14, 16, 30
AKAI	03, 22, 23	PANASONIC	08
AUDIO DYNAMICS	14, 16	PENTAX	05
BROCKSONIC	10	PHILCO	08, 29
CANON	08	PHILIPS	08, 29
CAPEHART	01	PIONEER	05
CITIZEN	09	QUASAR	08
CRAIG	12	RCA	00, 05, 07, 28, 35, 37
CURTIS MATHES	00, 08, 15	REALISTIC	02, 06, 08, 12, 15
DBX	14, 16	SAMSUNG	07, 32
EMERSON	10, 20, 34	SANYO	02, 12
FISHER	12, 18, 19	SCOTT	04, 13
FUNAI	15	SEARS	02, 05, 18, 19
GE	00, 07, 08, 32	SHARP	06, 24
GOLDSTAR	09	SHINTOM	31
HITACHI	05, 35, 36	SONY	17, 26, 38
INSTANT REPLAY	08	SYLVANIA	08, 15, 29
JC PENNEY	02, 05, 08, 14, 16, 30	SYMPHONIC	15
JVC	02, 14, 16, 30	TASHIKO	09
KENWOOD	02, 14, 16, 30	TATUNG	30
MAGNAVOX	08, 29	TEAC	15, 30
MARANTZ	02, 14, 16, 29, 30	TECHNICS	08
MARTA	09	TEKNIKA	21
MEMOREX	08, 12	TOSHIBA	13
MGA	04, 27	VECTOR RESEARCH	14, 16
MINOLTA	05	VIDEO CONCEPTS	14, 16
MITSUBISHI	04, 27	WARDS	06, 25
MONTGOMERY WARD	06	YAMAHA	02, 14, 16, 30
MULTITECH	07, 15, 32	ZENITH	11, 17

CABLE TV CONVERTER CODE TABLE

BRAND NAME	CODE NUMBER	BRAND NAME	CODE NUMBER
ANVISION	07, 08	PHILIPS	07, 08, 19, 26, 28, 29 32, 33, 40, 41
CABLESTAR	07, 08	PIONEER	18, 20
EAGLE	08	RANDTEK	07, 08
EASTERN INT	02	RCA	27
GENERAL INSTRUMENT	04, 05, 15, 23, 24, 25 30, 36	REGENCY	02
HAMLIN	12, 13, 34	SCIENTIFIC ATLANTA	03, 22
JERROLD	04, 05, 15, 23, 24, 25 30, 36	SYLVANIA	11
MACOM	37, 43	TEKNIKA	06
MAGNAVOX	07, 08, 19, 26, 28, 29 32, 33, 40, 41	TEXSCAN	10, 11
NSC	09	TOCOM	17, 21
OAK	01, 16, 38	UNIKA	31
		VIEWSTAR	07, 08, 28, 32, 41
		ZENITH	14, 42

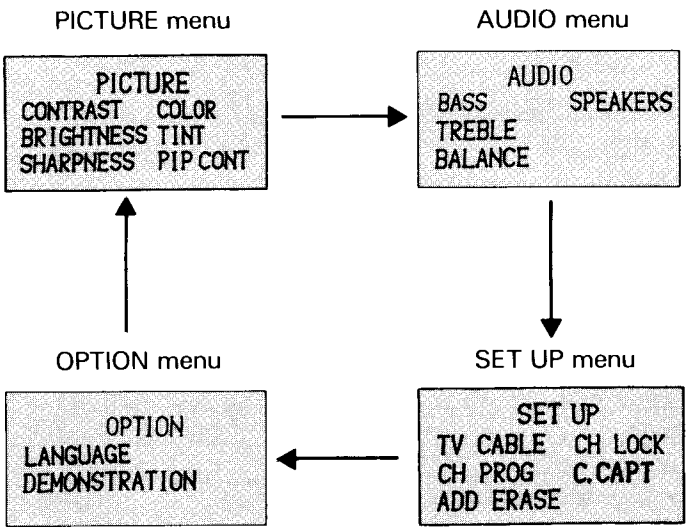
MENU FUNCTION (General Instructions)

We suggest you familiarize yourself with the procedure before using the Menu function.
To adjust any TV feature, the use of the Menu function is required. The adjustments that can be made to the TV appear on the screen.



MENU BUTTON (on TV)

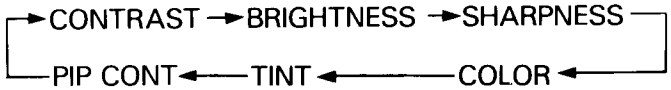
Each time you press the button, the PICTURE, AUDIO, SET UP or OPTION menu on-screen display is selected in the following order, then press the ADV button.



ADV BUTTON (on TV)

Use this button after you have pressed the MENU button to select the function you want to adjust.
Each time you press the button, the function to be adjusted will be selected in the following order.

<Example: PICTURE menu>

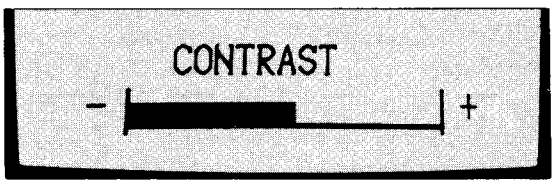


The selected function will be displayed in magenta.

–/+ BUTTONS (on TV and on Remote)

Use these buttons after you have pressed the ADV button or any of the four menu buttons (PICTURE, AUDIO, SETUP, or OPTION).

<Example: CONTRAST adjustment mode display>



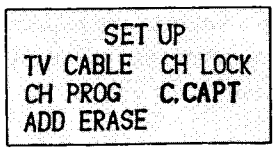
Decrease (– button) ⟷ Increase (+ button)

PIC (Picture) BUTTON (on Remote)

Press the button repeatedly until the PICTURE menu function you want to adjust is selected.
The selected function will be displayed in magenta. Then press the + or − button to adjust the setting.
Details for each function begin on page 32.

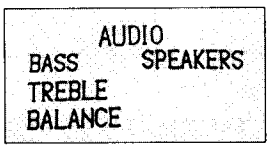
SETUP BUTTON (on Remote)

Press the button repeatedly until the SET UP menu function you want to adjust is selected.
The selected function will be displayed in magenta. Then press the + or − button to adjust the setting.
Details for each function begin on page 20.



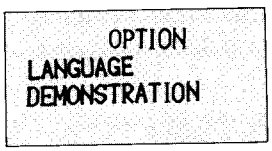
AUDIO BUTTON (on Remote)

Press the button repeatedly until the AUDIO menu function you want to adjust is selected.
The selected function will be displayed in magenta. Then press the + or − button to adjust the setting.
Details for each function begin on page 34.



OPTION BUTTON (on Remote)

Press the button repeatedly until the OPTION menu function you want to adjust is selected.
The selected function will be displayed in magenta. Then press the + or − button to adjust the setting.
Details for each function begin on page 38.



EXIT BUTTON (on Remote)

The above four menu displays will automatically disappear from the screen if no control has been operated for about 15 seconds, and all other menu displays also disappear after about 6 seconds.
If you want to clear the screen of all on-screen displays instantly, press this button.

Notes:

- The ADV button on the TV set will function as the TV/VIDEO button when no menu display is on the screen.
- The + / − buttons on the TV set will function as the VOLUME ▲/▼ buttons when no menu display is on the screen.

TV CHANNELS

This TV will receive the following TV signals:

1. TV: Off the air TV signals. (VHF channels 2 thru 13 and UHF channels 14 thru 69)
2. STD CABLE: Standard (or IRC: Incremental Related Carrier) cable TV signals.
3. HRC CABLE: Harmonic Related Carrier cable TV signals.
4. IRC CABLE: Incremental Related Carrier cable TV signals.

For each of these systems, your TV set has exact frequencies built into it to ensure precise tuning. For precise tuning, the TV CABLE function must be set to match your TV or CABLE system. The following chart shows channels available in each system and how your TV displays them. When you connect your TV to a cable TV system and if you are not sure what system they are using, proceed with the following section "HOW TO FIND YOUR TYPE OF CABLE SYSTEM" or consult your local cable company to check if your system is STD, HRC or IRC.

HOW TO FIND YOUR TYPE OF CABLE SYSTEM

1 Select the "STD CABLE" mode following the instructions shown below.

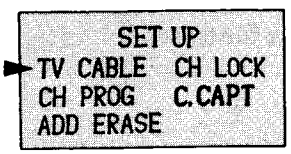
2 Select various channels and confirm whether the channel will lock immediately with perfect picture. If the channels seem to take a few seconds to lock in, your cable system may be one of the other cable systems. In this case, continue with the following steps.

3 Select the "HRC CABLE" mode and try above procedure again.

4 If you are having problem with only channel 5 or 6, you may have an IRC system so change the mode to the "IRC CABLE".

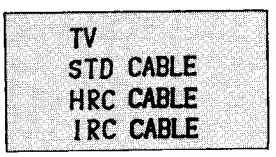
SETTING THE TV CABLE FUNCTION

1 Press the SETUP button on the Remote Control or the MENU button on the TV set to display the SET UP menu on the screen shown below.



Repeatedly press the SETUP button on the Remote Control or the ADV button on the TV set until "TV CABLE" is displayed in magenta.

2 Press either the + or − button until the mode that corresponds to your TV or CABLE system is displayed in magenta.



CABLE TV CHANNEL CHART

NUMBER ON THIS TV	CABLE TV CHANNEL	NUMBER ON THIS TV	CABLE TV CHANNEL
1	A-8	63	AAA
2	2	64	BBB
3	3	65	65
4	4	66	66
5	5/A-7	⋮	⋮
6	6/A-6	⋮	⋮
7	7	93	93
⋮	⋮	94	94
⋮	⋮	95	A-5
13	13	96	A-4
14	A	97	A-3
15	B	98	A-2
⋮	⋮	99	A-1
⋮	⋮	100	100
35	V	101	101
36	W	⋮	⋮
37	AA	⋮	⋮
38	BB	124	124
⋮	⋮	125	125
⋮	⋮		
61	YY		
62	ZZ		

PROGRAMMING CHANNEL MEMORY

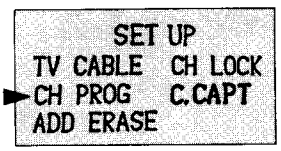
This TV set can memorize channels you use and erase channels you do not use.
When the CHANNEL ▲ or ▼ button is pressed, the TV goes to the next memorized channel. Channel selection is easier and faster. In many television viewing areas, programming available channels into memory is an easy one step procedure with the CH PROG function. When it is decided that certain channels should be erased from the channel scan memory, the ADD ERASE function provides complete programming flexibility.

CH PROG FUNCTION

Before using the CHANNEL ▲/▼ buttons, autoprogram channels as follows:

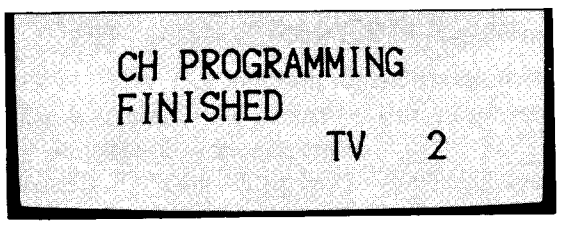
Autoprogramming channels

1 Select the SET UP menu, and repeatedly press the SETUP button on the Remote Control or the ADV button on the TV set until "CH PROG" is displayed in magenta.



2 Press either the + or − button to start autoprogramming.
The TV will automatically cycle through all channels and place active channels in the channel memory.
When the following message appears on the screen, the autoprogram is complete.

< **EXAMPLE** >



You can check to see which channels are in memory by pressing the CHANNEL ▲ or ▼ button.

Note: If AC power supply is cut off for a few seconds or more, your autoprogramming will be cancelled and will return to the original factory programming. In that case, reautoprogram your TV.

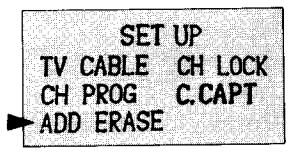
ADD ERASE FUNCTION

First follow the instructions "CH PROG FUNCTION", and then add or erase individual channels as desired.

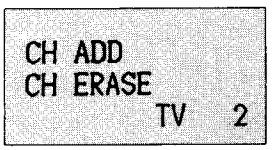
Erasing/Adding channels

1 Select the channel you want to erase using the CHANNEL ▲ or ▼ button, or select the channel you want to add using the CHANNEL NUMBER buttons.

2 Select the SET UP menu, and repeatedly press the SETUP button on the Remote Control or the ADV button on the TV set until "ADD ERASE" is displayed in magenta.



3 Press either the + or − button:
To erase the channel, press the button until "CH ERASE" is displayed in magenta.
To add the channel, press the button until "CH ADD" is displayed in magenta.



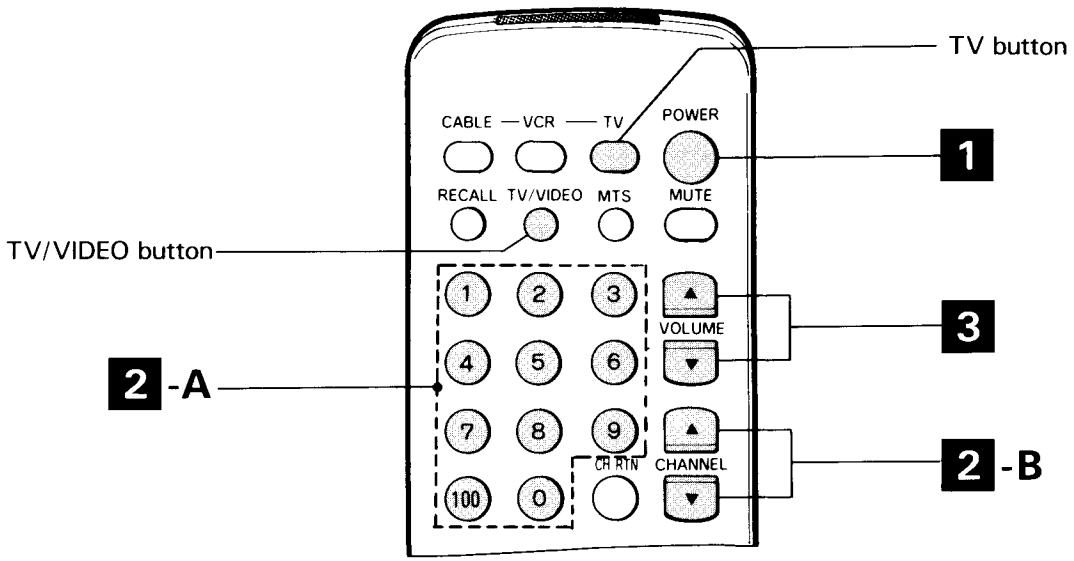
4 Repeat steps 1 through 3 for other channels.
Press CHANNEL ▲ or ▼ button to make sure the channels are programmed correctly.

Note: The ADV button on the TV set will function only when any of the menu displays is on the screen.

WATCHING TV PROGRAMS

Generally, the Remote Control is all that is required to operate the TV set.

- First press the TV button on the Remote Control.

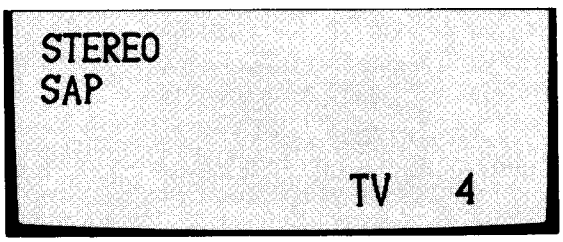


1 TO TURN THE TV SET ON

Press the POWER button to turn the TV set on.
The following on-screen information will be displayed for a few seconds.

- Channel number or VIDEO mode selected.
- Stereo or SAP audio status.

<Example>



To turn the TV set off, press the button again.

Note: The TV/VIDEO button is used to view signals coming from other devices like VCR's or Video Disc Players connected to this TV. Details are on page 40.

2 TO SELECT CHANNELS

Make sure the TV CABLE function (page 20) is properly set. Then select your desired channels using the CHANNEL NUMBER buttons or the CHANNEL ▼/▲ buttons.

A. USING THE CHANNEL NUMBER BUTTONS

- To select channels 1 through 9, two methods are available.

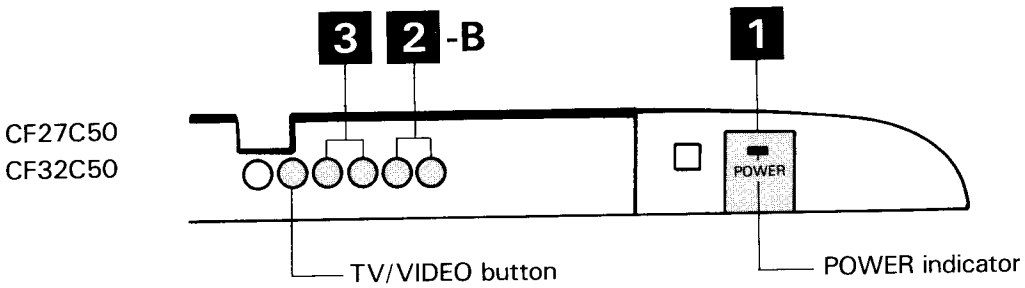
  Example: To select channel 4.
  One-digit entry — Press "4". Channel 4 will be selected within 2 seconds.
  Two-digit entry — Press "0" and "4". Channel 4 will be selected immediately.

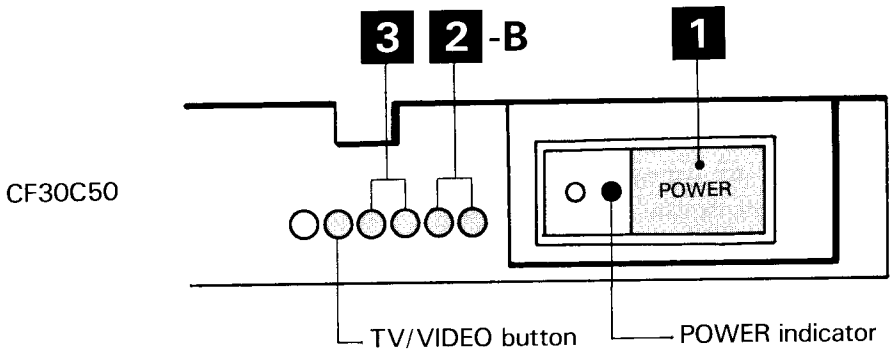
- To select channels 10 through 99, the two-digit entry must be used.

  Example: To select channel 38.
  Press "3" and "8", and channel 38 will be selected immediately.

- To select channels 100 through 125, the three-digit entry must be used.

  Example: Press "100", "2" and "5" in sequence. Channel 125 will be selected.





B. USING THE CHANNEL ▲/▼ BUTTONS

When you have completed channel programming according to the instructions, use the CHANNEL ▼/▲ buttons.
Follow the section "PROGRAMMING CHANNEL MEMORY" on page 21.

Press and release the CHANNEL ▲ or ▼ button. The set will select the next memorized channel. It will not stop at unmemorized channels. Press the button again to select the next memorized channel.

<Example – TV mode>

▲ button – for higher numbered channels.

2 → 3 ----→ 68 → 69 → 2 ----→

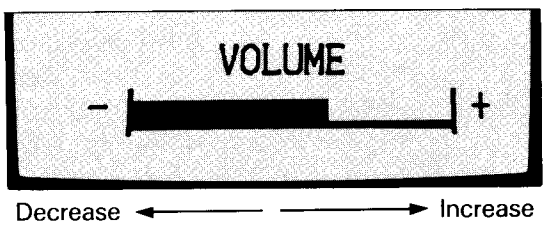
▼ button – for lower numbered channels.

69 → 68 ----→ 3 → 2 → 69 ----→

3 TO ADJUST VOLUME

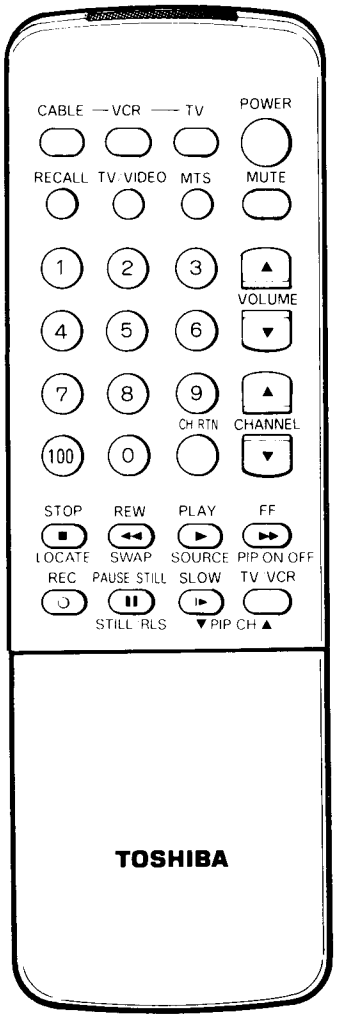
To increase volume, press the VOLUME ▲ button. To decrease volume, press the VOLUME ▼ button. Press and hold either button until your desired volume level is obtained.

A visual display of the volume level is provided by a magenta bar graph displayed on the screen shown below.



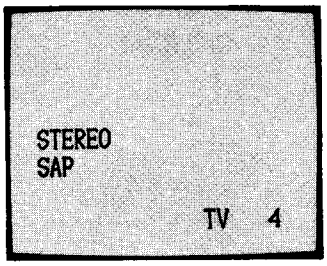
Note: The VOLUME ▲/▼ buttons on the TV set will function as the menu +/– buttons while any of the menu displays (PICTURE, AUDIO, SET UP, or OPTION) is on the screen. (See page 18.)

CONVENIENT REMOTE FUNCTIONS



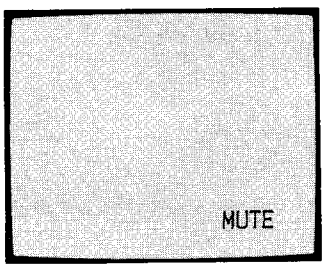
CALLING UP THE ON-SCREEN INFORMATION

To display the channel number or selected input source ("VIDEO 1" or "VIDEO 2"), and stereo or SAP audio status on the screen for a few seconds, press the RECALL button.



MUTING THE SOUND

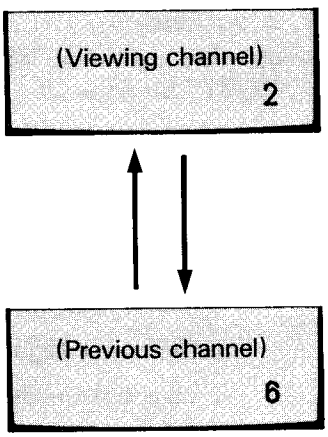
To mute the sound immediately without affecting the picture, press the MUTE button. The word "MUTE" will be displayed on the screen as shown. This is useful during telephone calls or other interruptions.
To restore the sound, press the button again.



CHANGING QUICKLY BETWEEN TWO CHANNELS

To return to the last channel that was tuned previously, press the CH RTN button. This is useful should you want to view two channels. This allows you to view two programs without entering the actual channel number each time.

- To operate, select the first channel you want to view. Then select the other channel with the CHANNEL NUMBER buttons.
- The TV will now change back and forth between the two channels each time you press the CH RTN button.

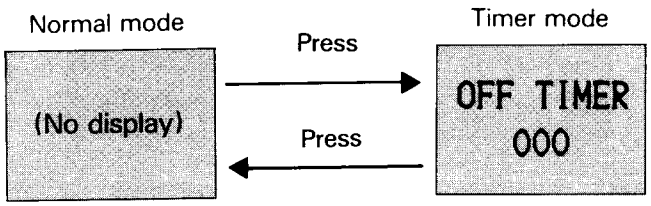


SETTING THE OFF-TIMER (SLEEP)

This feature allows you to set the TV to turn itself off automatically after a certain period of time (every 10 minutes, up to 180 minutes = 3 hours). This is useful whenever you want to watch TV for an hour or so before going to sleep.

TIMER BUTTON

Each time you press the button, the Normal mode and Timer mode will alternate as shown below.



TO SET THE OFF-TIMER

Example: To set the off-timer to turn the TV set off after 120 minutes.

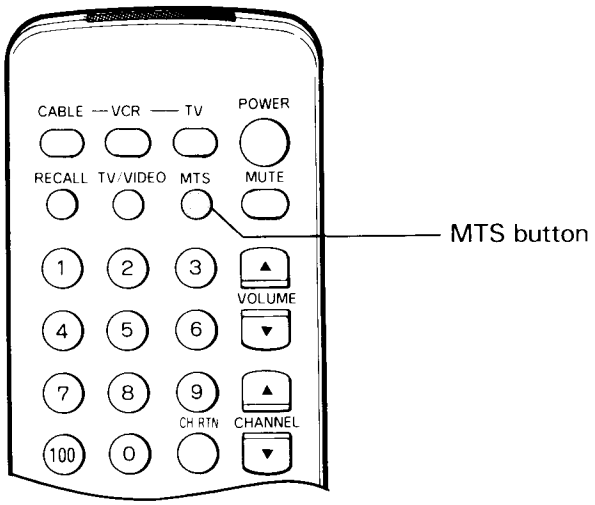
ON-SCREEN DISPLAY	PROCEDURE
000	1. Press the TIMER button to select the Timer mode.
100	2. Press "1" button.
120	3. Press "2" button, and press TIMER button to start the timer. The color of display changes from magenta to cyan, and then goes off.
Setting completed.	

Notes:

- If you press the POWER button while the timer is operating, the timer setting will be cancelled.
- If you want to know the time remaining, press the TIMER button. Remaining time will be displayed on the screen. To erase the display, press the button again to set to the Normal mode.
- You cannot select channels with the Remote Control if the timer display is on the screen.
- If a vacant channel is tuned or TV broadcast for a day is finished, the TV will automatically turn off after about 15 minutes. However, if the Off-timer is operating, it takes precedence. This ***Auto-Power-Off*** feature does not operate in the VIDEO mode.

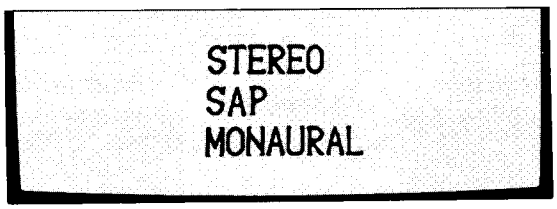
RECEIVING STEREO/SAP BROADCASTS

The Multi-channel TV Sound or MTS feature on this TV allows you to improve your TV viewing with high fidelity stereo sound. MTS also provides for an extra channel called Second Audio Program or SAP, used to transmit a second language for bilingual transmission or other sound.



MTS BUTTON

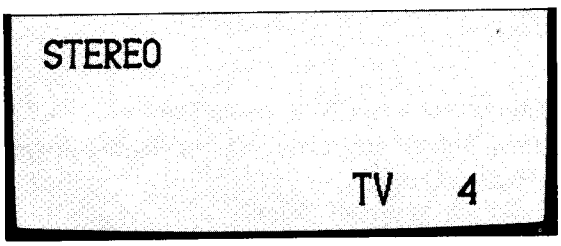
Each time you press the button, the STEREO, SAP, or MONAURAL mode will be selected in order.
The usable selections will be dispalyed in yellow.
The selected mode will be displayed in magenta.



Select the appropriate mode according to various incoming broadcast signals.

LISTENING TO STEREO SOUND

When the TV receives a stereo broadcast, the word "STEREO" is displayed on the screen whenever the TV is turned on, the channel is selected or the RECALL button is pressed.



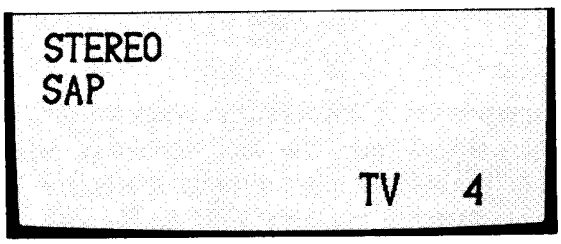
You can then listen to the stereo sound by pressing the MTS button. Select "STEREO".

If a broadcasting signal is not strong enough and noise-free stereo sound is not available, select the MONAURAL mode by pressing the MTS button to receive monaural sound. The noise should stop.

Normally this function can be left in the STEREO mode. Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.

LISTENING TO SECOND LANGUAGE

When the TV receives a SAP broadcast, the word "SAP" is displayed on the screen.



You can then listen to the second language by pressing the MTS button. Select "SAP".

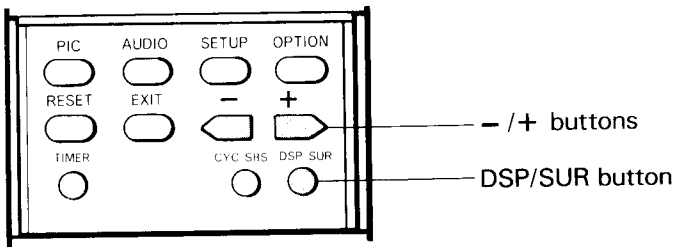
Notes:

- Be sure you have selected the Stereo mode if broadcast is in stereo.
- If the word "STEREO" (or "SAP") is not displayed on the screen in spite of a known MTS broadcast, select the STEREO or SAP mode by pressing the MTS button again.
- The MTS button does not function in the VIDEO mode.

OPERATING SURROUND FUNCTION

The Surround function expands the audio listening field wider and deeper than you would believe possible from a TV's speakers. This function processes stereo signals from a TV broadcast or Video input.
If a TV program is broadast in monaural, your TV will automatically reproduce monaural audio.

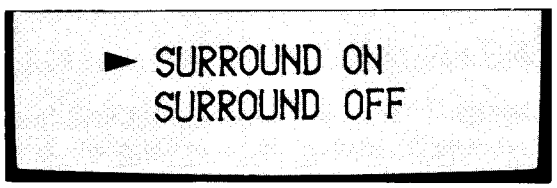
Behind the cover



TO ACTIVATE SURROUND

1 Select the STEREO mode by pressing the MTS button.

2 Press the DSP/SUR button on the Remote Control to call up the Surround ON/OFF mode on-screen display shown below.



Each time you press the button, "ON" mode and "OFF" mode will alternate. Press the button until "SURROUND ON" is displayed in magenta.
The Surround function has now been activated.

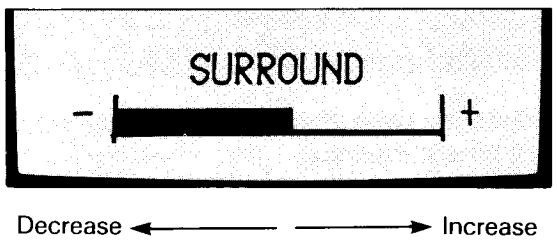
To deactivate this function, select "SURROUND OFF".

Note: Normally you can leave the MTS button set to "STEREO" and the Surround function set to "ON". Your TV will then automatically produce either SURROUND stereo or monaural, whatever is broadcast.

TO ADJUST SURROUND LEVEL

1 Press the DSP/SUR button on the Remote Control to call up the Surround ON/OFF mode on-screen display.

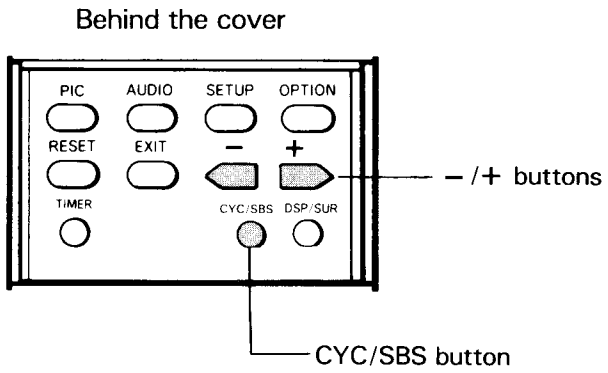
2 Press the + or – button while the Surround ON/OFF mode display is on the screen to call up the Surround adjustment mode display shown below.



3 Press the + button to increase Surround level.
Press the – button to decrease Surround level.
Press and hold either button until your desired level is obtained.

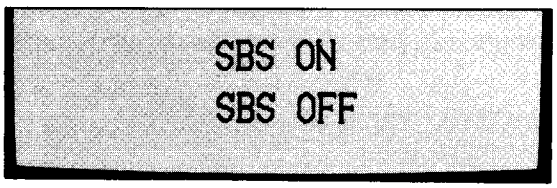
OPERATING SUB-BASS SYSTEM (only for CF32C50)

The Sub-Bass System allows you to improve bass performance (even when the volume is low).



TO ACTIVATE THE SUB-BASS SYSTEM

1 Press the CYC/SBS button on the Remote Control once to call up the Sub-Bass System ON/OFF mode on-screen display shown below.



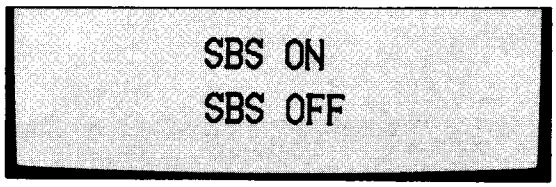
Each time you press the button, the ON mode and OFF mode will alternate.
Press the button until "SBS ON" is displayed in magenta.

The Sub-Bass System has now been activated.

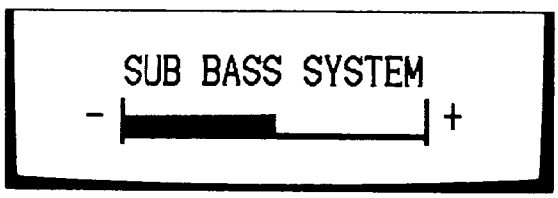
To deactivate this function, select "SBS OFF".

TO ADJUST THE SBS LEVEL

1 Press the CYC/SBS button once to call up the SBS ON/OFF mode on-screen display shown below.



2 Press the + or – button to call up the SBS level adjustment on-screen display as shown below.



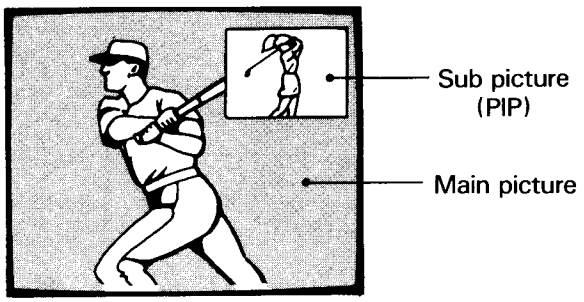
Decrease ◄——— ———► Increase

3 Press the + button to increase the SBS level.
Press the – button to decrease the SBS level.
A visual display of the SBS level is provided by a magenta bar graph displayed on the screen.
Press and hold either button until your desired level is obtained.

WATCHING PICTURE IN PICTURE (PIP)

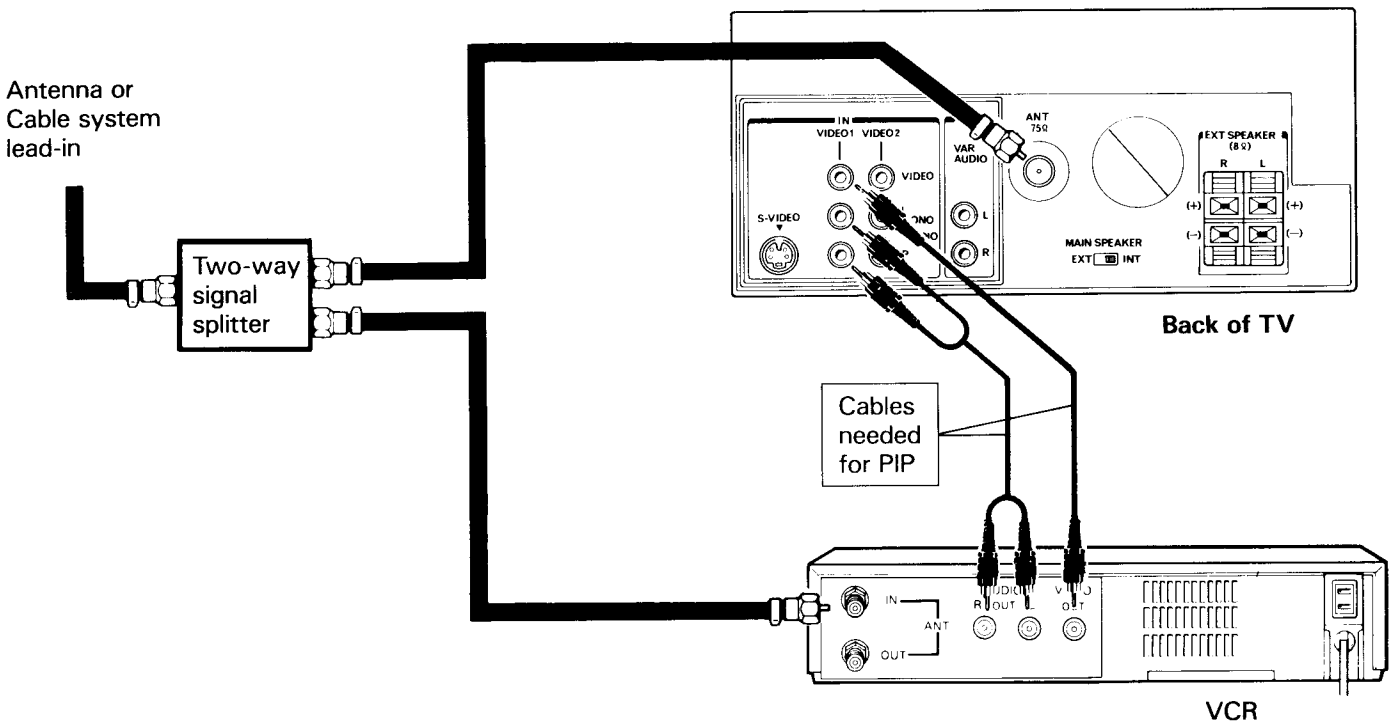
To be continued ▶

In addition to the main picture, another TV program or video source being received through the VIDEO input jacks can be displayed simultaneously as a sub picture. After you have connected another video source (such as a VCR) to your TV as shown below, you are ready to display the Picture in Picture (PIP).



Note: When using the PIP, the TV can display two pictures at once. However, one picture must be from an antenna input channel and the other must be from a VIDEO input channel.

ANTENNA/CABLE TV AND VCR CONNECTIONS



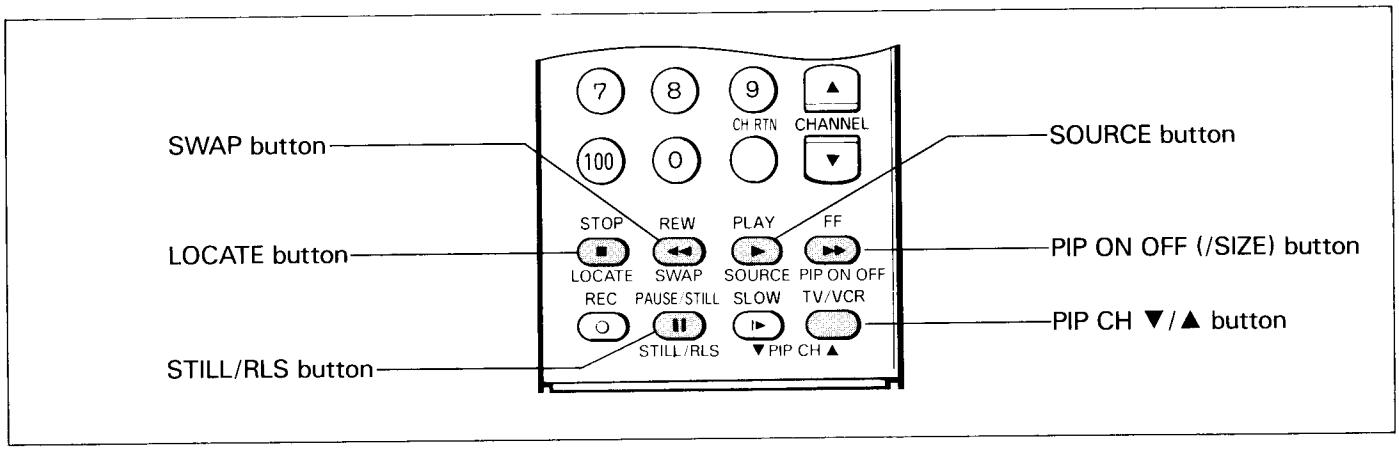
OPERATION

Suppose you wish to watch the TV channel that the VCR is tuned to with PIP while the main picture shows one TV channel:

1. Turn the TV set on and select the TV channel you want to watch using the TV channel keys.
2. Turn the VCR on.
3. Press the PIP ON OFF button to call up the PIP window on the screen, and select the VIDEO 1 mode by pressing the SOURCE button. If the VCR is connected to the TV's VIDEO 2 jacks, select the VIDEO 2 mode.
4. Select the channel of the PIP using the VCR channel keys.

Note: If you are utilizing the cable TV converter, use the diagram shown on page 9. However, the Video/Audio cables must also be connected as in above diagram.

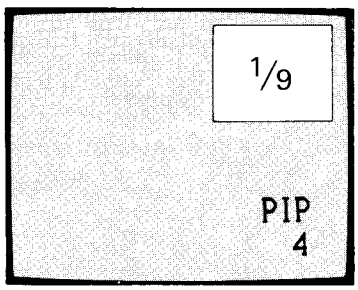
WATCHING PICTURE IN PICTURE (PIP)



PIP ON OFF (/SIZE) BUTTON

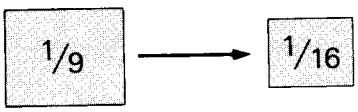
1 To open up the PIP window

Press the button once. The 1/9 size window picture will appear as shown.



2 To change the window size

Press the button again. The 1/16 size window picture will appear as shown.



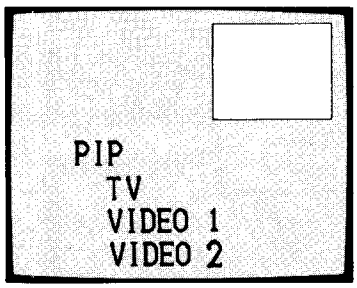
3 To make the PIP window disappear

Press the button again.

Each time you press the button, above 1, 2 or 3 will be selected cyclically.

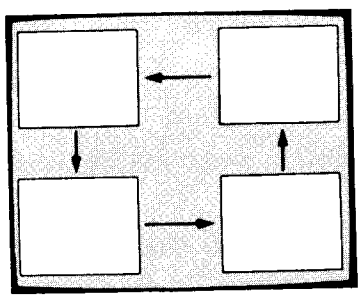
SOURCE BUTTON

Press the button repeatedly to select input source (TV, VIDEO 1 or VIDEO 2).
The selected mode will be displayed in magenta.



LOCATE BUTTON

Press the button to move PIP from corner to corner of the main screen. Each time you press the button, PIP will move in the following order.



PIP CH ▼/▲ BUTTON

These buttons are available when the main picture you are watching is coming from the other source such as a VCR.

Press the ▲ button to select the next higher channel in channel memory.
Press the ▼ button to select the next lower channel in channel memory.

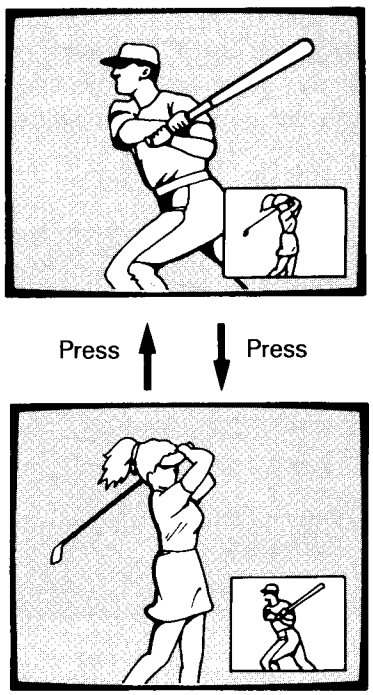
Note: If you cannot select any certain Cable channel, resetting the TV CABLE function may be necessary.
Try to select another CABLE mode.
See page 20.

STILL/RLS (Release) BUTTON

Press the STILL/RLS button once while PIP is on the screen to freeze the PIP picture.
To return to an action picture, press the button again.

SWAP BUTTON

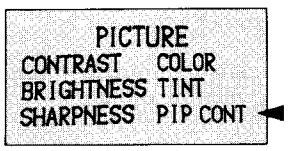
Press the SWAP button once to switch the PIP picture with the main picture.



ADJUSTING PIP CONTRAST

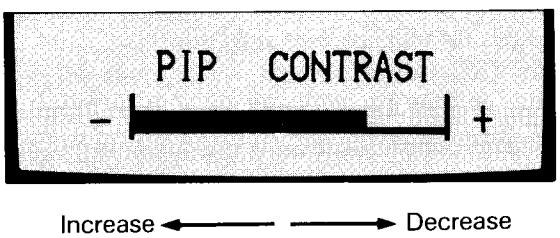
First press the PIP ON OFF button to display the PIP picture, then adjust the PIP contrast as follows:

1 Press the PIC button on the Remote Control or MENU button on the TV set to display the PICTURE menu shown below.



Repeatedly press the PIC button on the Remote Control or the ADV button on the TV set until "PIP CONT" is displayed in magenta.

2 Press the + or − button to call up the PIP CONTRAST adjustment mode on-screen display shown below.



Press + to increase contrast.
Press − to decrease contrast.
Press and hold either button until your desired contrast is obtained.

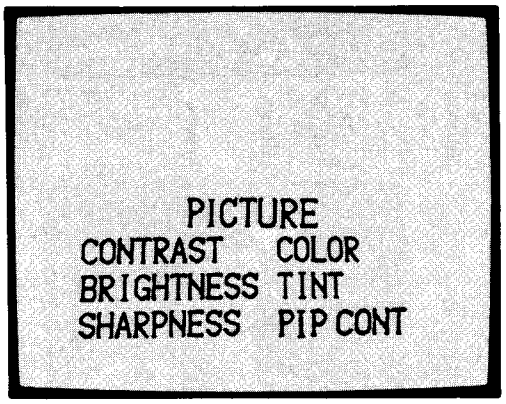
Note: If the RESET button is pressed, the PIP contrast will be reset to the maximum (factory-preset level).

ADJUSTING PICTURE

You may wish to adjust picture functions (CONTRAST, BRIGHTNESS, SHARPNESS, COLOR and TINT) to suit your personal preference.

1 Press the PIC button on the Remote Control or MENU button on the TV set to display the PICTURE menu shown below.

Repeatedly press the PIC button on the Remote Control or the ADV button on the TV set, then press the + or − button to adjust each picture function.

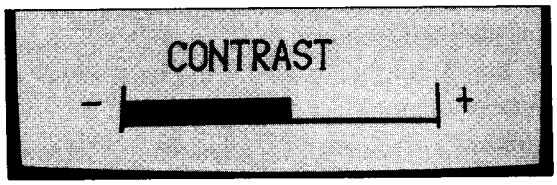


Notes:

- The PICTURE menu will automatically disappear from the screen if no control has been operated for about 15 seconds.
- The adjustment mode display will automatically disappear from the screen if no control has been operated for about 6 seconds.
- If you continue to adjust any picture functions, press the PIC button or the ADV button while the adjustment mode display remains on the screen. The next function will be selected. This is a quick step approach for total picture adjustments.
- The ADV button on the TV set will function only when any of the menu displays is on the screen.
- The PIP CONT function is explained on page 31.

TO ADJUST CONTRAST

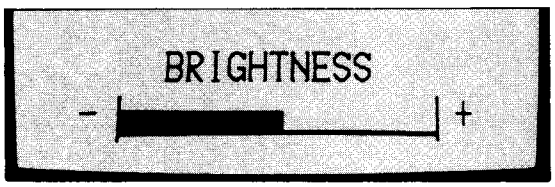
1 Press the PIC button or the ADV button until "CONTRAST" is displayed in magenta, then press the + or − button.



2 Press + to increase contrast. The magenta bar moves right.
Press − to decrease contrast. The magenta bar moves left.
Press and hold either button until your desired contrast is obtained.

TO ADJUST BRIGHTNESS

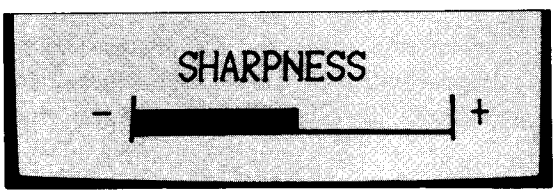
1 Press the PIC button or the ADV button until "BRIGHTNESS" is displayed in magenta, then press the + or − button.



2 Press + to increase brightness.
Press − to decrease brightness.
Press and hold either button until your desired brightness is obtained.

TO ADJUST SHARPNESS

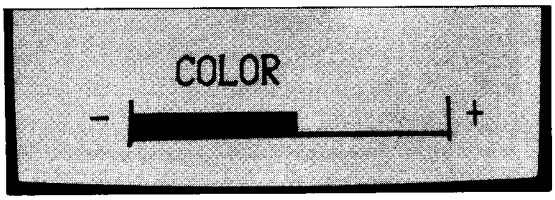
1 Press the PIC button or the ADV button until "SHARPNESS" is displayed in magenta, then press the + or − button.



2 Press + for sharper picture.
Press − for softer picture.
Press and hold either button until your desired sharpness is obtained.

TO ADJUST COLOR

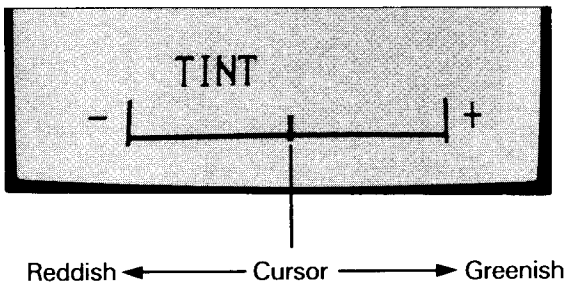
1 Press the PIC button or the ADV button until "COLOR" is displayed in magenta, then press the + or – button.



2 Press + to increase color intensity.
Press – to decrease color intensity.
Press and hold either button until your desired color intensity is obtained.

TO ADJUST TINT

1 Press the PIC button or the ADV button until "TINT" is displayed in magenta, then press the + or – button.

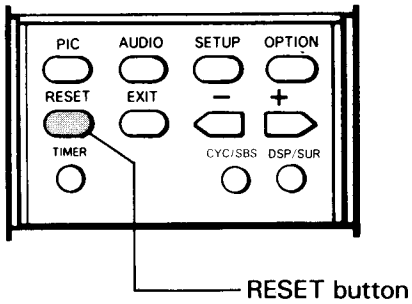


2 Press + to add green tint to the color tone.
Press – to add red tint to the color tone.
Press and hold either button until natural flesh tone is obtained.
The cursor will be indicated in yellow at the center setting.

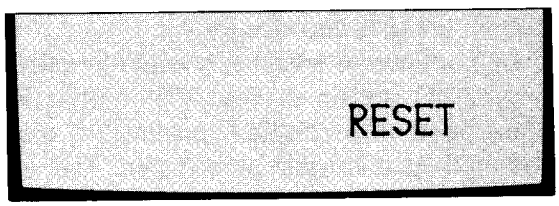
RESET FUNCTION

You can restore all Picture and Audio functions to the factory-preset level by one push of the RESET button on the Remote Control as shown below.

Behind the cover



Pressing the button will automatically set the CONTRAST to the maximum and all other functions (BRIGHTNESS, SHARPNESS, COLOR, TINT, BASS, TREBLE, BALANCE and PIP CONT) at the center.
The word "RESET" will be displayed on the screen for a few seconds as shown below.

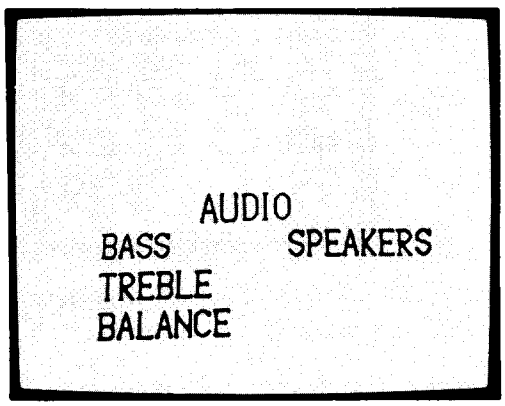


ADJUSTING AUDIO

You may wish to adjust audio functions (BASS, TREBLE, and BALANCE) to suit your personal preference.

1 Press the AUDIO button on the Remote Control or MENU button on the TV set to display the AUDIO menu shown below.

Repeatedly press the AUDIO button or the ADV button on the TV set, then press the + or – button to adjust each picture function.

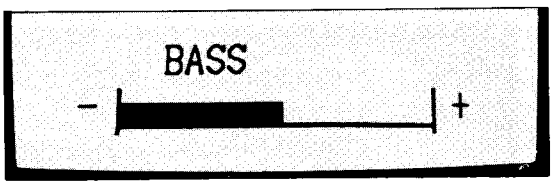


Notes:

- The AUDIO menu will automatically disappear from the screen if no control has been operated for about 15 seconds.
- The adjustment mode display will automatically disappear from the screen if no control has been operated for about 6 seconds.
- If you continue to adjust any audio functions, press the AUDIO button or the ADV button while the adjustment mode display remains on the screen. The next function will be selected. This is a quick step approach for total audio adjustments.
- To return the audio functions you have adjusted to the normal settings, press the RESET button on the Remote Control. See page 33.
- The ADV button on the TV set will function only when any of the menu displays is on the screen.
- The SPEAKERS function is explained on page 43.

TO ADJUST BASS

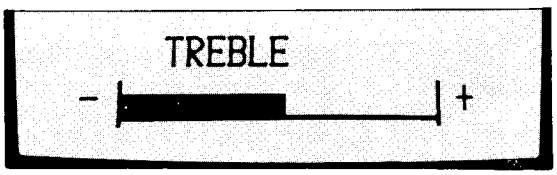
1 Press the AUDIO button or the ADV button until "BASS" is displayed in magenta, then press the + or – button.



2 Press + to increase bass.
Press – to decrease bass.
Press and hold either button until your desired bass level is obtained.

TO ADJUST TREBLE

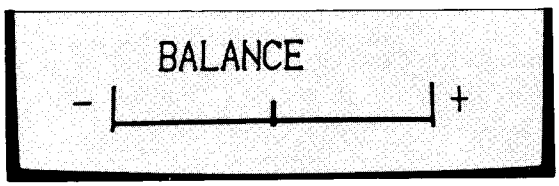
1 Press the AUDIO button or the ADV button until "TREBLE" is displayed in magenta, then press the + or – button.



2 Press + to increase treble.
Press – to decrease treble.
Press and hold either button until your desired treble level is obtained.

TO ADJUST BALANCE

1 Press the AUDIO button or the ADV button until "BALANCE" is displayed in magenta, then press the + or – button.



2 Press + to lower sound from the left speaker.
Press – to lower sound from the right speaker.
Press and hold either button until the sound seems to originate from a point halfway between the speakers. The cursor will be indicated in yellow at the center setting.

LOCKING CHANNELS FOR PARENTAL CONTROL

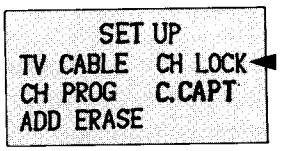
This feature allows you to program the TV so that any specific channel cannot be viewed without the use of the CHANNEL NUMBER buttons on the Remote Control.
This function is included in the SET UP menu.

TO LOCK OUT CHANNELS

1 Select the channel you want to lock out.

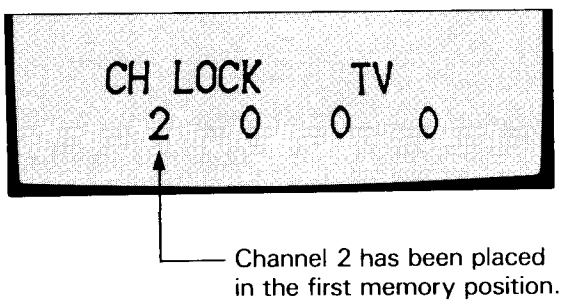
2 Press the SETUP button on the Remote Control or the MENU button on the TV set to display the SET UP menu on the screen.

Repeatedly press the SETUP button on the Remote Control or the ADV button on the TV set until "CH LOCK" is displayed in magenta.



3 Press the + or − button once.
The channel lock program mode display shown below appears on the screen. This TV has four memory spaces for the TV mode and the CABLE mode respectively.

<Example: Channel 2 is locked out>



The program display will remain on the screen for about 4 seconds.

4 Repeat steps 1 through 3 for each channel you want to lock out.

5 Press the CHANNEL ▲ or ▼ button to make sure the channels you have locked out are not tuned.

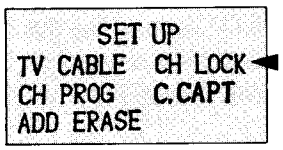
You can select the channels you have locked out using the CHANNEL NUMBER buttons on the Remote Control.

TO RESTORE CHANNELS

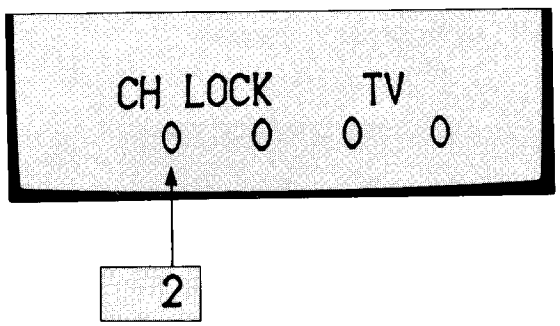
You may want to restore the channels which have been locked out once.

1 Select the channel you want to restore to normal viewing by pressing the CHANNEL NUMBER buttons.

2 Select "CH LOCK" function on-screen display following the step 2 at the left column.



3 Press the + or − button once.
The channel lock program mode display shown below will appear on the screen.



The channel selected at step 1 has been restored to normal viewing.

4 Repeat steps 1 through 3 for other channels.

5 Press the CHANNEL ▲ or ▼ button to make sure the channels you have restored to normal viewing are tuned.

Note: This TV automatically tunes to the channel you were viewing last whenever you turn on the TV. If you turn off the TV tuned in the locked channel, simply change the TV to an unlocked channel and then turn off the TV.

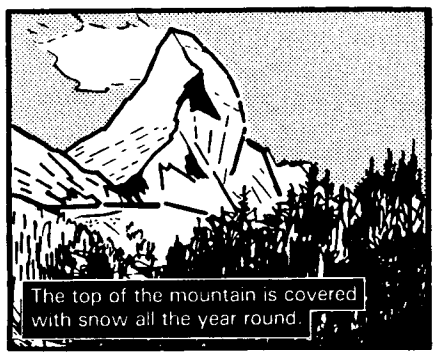
OPERATING CLOSED CAPTION FUNCTION

CAPTION

Closed captioning displays dialogue, narration, and/or sound effects of a TV program on the screen in a manner similar to subtitles in a movie.

Captioning is especially helpful for hearing impaired individuals.

Captions will appear at either the top or bottom of the screen during caption broadcasts as shown at the right.

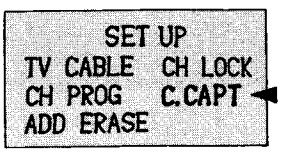


TO DISPLAY CAPTIONS

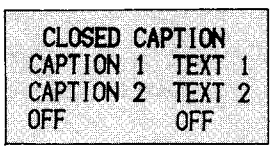
1 Check your local TV listings for the time and channel number of captioned programs. Programs captioned are usually notated by its service marks such as "CC".

2 Press the SETUP button on the Remote Control or the MENU button on the TV set to display the SET UP menu on the screen.

Repeatedly press the SETUP button on the Remote Control or the ADV button on the TV set until "C. CAPT" is displayed in magenta.



3 Press the + or − button to call up the closed caption select mode display shown below on the screen.



4 Press the + or − button until "CAPTION 1" or "CAPTION 2" is displayed in magenta.
The CAPTION 2 mode may be utilized for alternate languages if they are being transmitted.
The TV will display captions automatically if the program you are watching has been captioned.

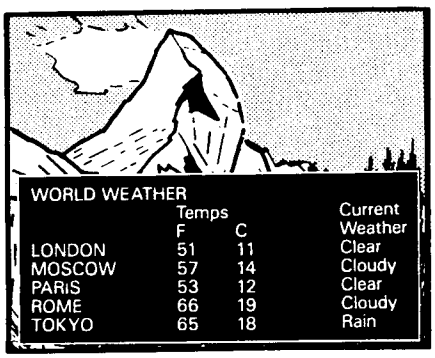
If you don't want the caption displayed, select "OFF".

Note: The following situations may not be acceptable to decode the closed-captioned signal with this TV set.

- The video tape which was dubbed.
- The weak signal reception.
- The nonstandardized signal reception.

TEXT

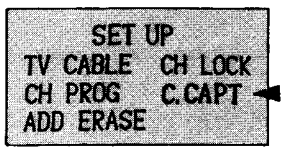
Text is information that is displayed on the lower half of a TV screen. It is not related to the program on the TV screen. For example, it could be a listing of the closed-captioned programs, news, weather information or stock market reports.



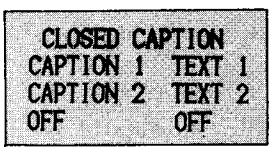
TO DISPLAY TEXT INFORMATION

1 Press the SETUP button on the Remote Control or the MENU button on the TV set to display the SET UP menu on the screen.

Repeatedly press the SETUP button on the Remote Control or the ADV button on the TV set until "C. CAPT" is displayed in magenta.



2 Press the + or − button to call up the closed caption select mode display shown below on the screen.



3 Press the + or − button until "TEXT 1" or "TEXT 2" is displayed in magenta.

The TV displays TEXT information automatically if the program you are watching has text added.

If you don't want to display the TEXT information, select "OFF".

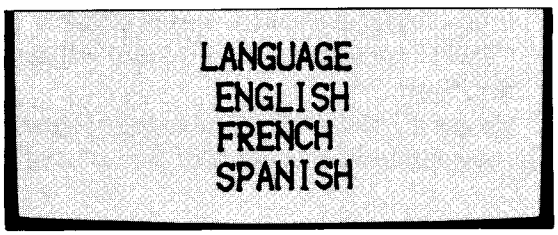
Note: If you select a Caption format channel and the "TEXT" mode, the TEXT screen will always be displayed.
However, if the TEXT character signal is not transmitted, the characters are not displayed.

USING OPTION MENU

LANGUAGE FUNCTION

Three different languages (ENGLISH, FRENCH, and SPANISH) are available for the on-screen messages, and you can choose the desired one.

1 Select the OPTION menu and press the OPTION button on the Remote Control or the ADV button on the TV until the word "LANGUAGE" is displayed in magenta, then press the + or − button to display the adjustment mode shown below on the screen.

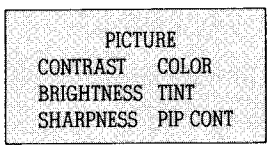


2 Press the + or − button to select your desired language;
Each time your press the button, "ENGLISH", "FRENCH", or "SPANISH" mode will be selected in order.
The selected mode will be displayed in magenta.

Selecting completed.

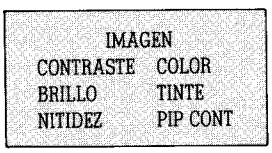
<Example: PICTURE menu display>

<ENGLISH>



<FRENCH>

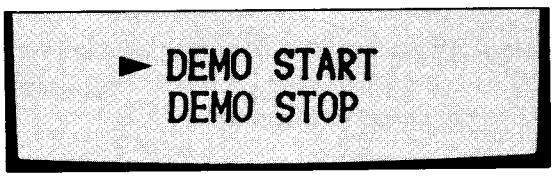
<SPANISH>



DEMONSTRATION FUNCTION

When this function is activated, your TV will automatically display a variety of its on-screen menus and special features. This function is provided for TOSHIBA dealers. You may not need to use this function.

1 Select the OPTION menu, and press the OPTION button or the ADV button until "DEMONSTRATION" is displayed in magenta, then press the + or − button once.
The on-screen display shown below will appear.
The words "DEMO START" should be in magenta.
The demonstration will start after about 6 seconds.



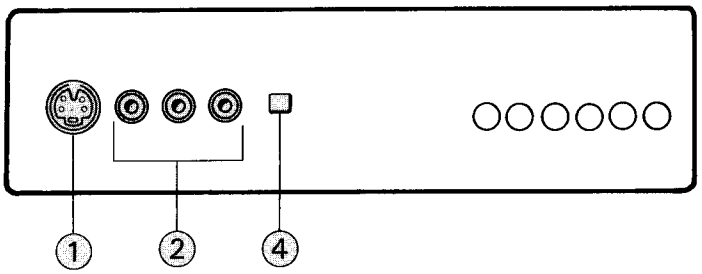
To stop the demonstration, select "DEMO STOP" mode.

Note: The on-screen demonstration will continue even if the TV is turned off. And to turn the on-screen demonstration off, follow the instructions listed above.

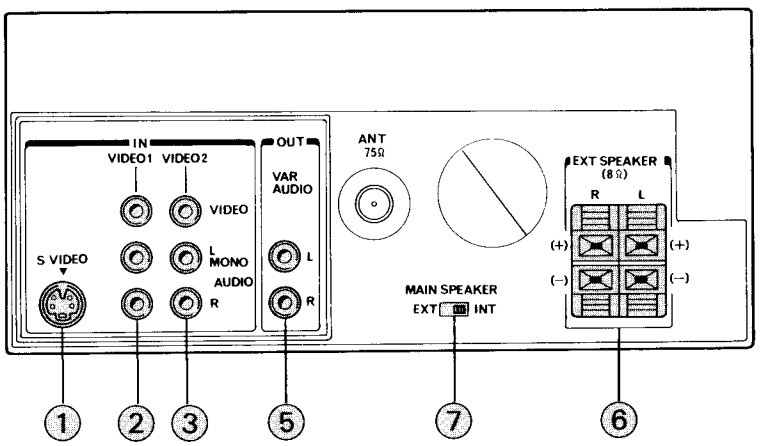
MONITOR PANEL

This TV set is equipped with the S-VIDEO INPUT connectors, VIDEO/AUDIO INPUT jacks, VARIABLE AUDIO OUTPUT jacks, and EXTERNAL SPEAKER terminals for connecting your desired video/audio equipment.

FRONT TERMINALS



REAR PANEL VIEW



① **S-VIDEO Connectors** — provide for direct S-video connection from S-VHS VCR (or camcorder). The TV's VIDEO 1 audio jacks can also be used to connect the VCR's audio cables. Connection details are on pages 41 and 42.

②③ **VIDEO 1/VIDEO 2 Jacks** — provide for direct connection of video devices (VCR, camcorder, etc.) with video/audio inputs. Connection details are on page 40 and 42.

④ **VIDEO 1 SELECT Button** — lets you switch between two signal sources connected to the Front VIDEO 1 and Rear VIDEO 1 jacks. See page 40 for details.

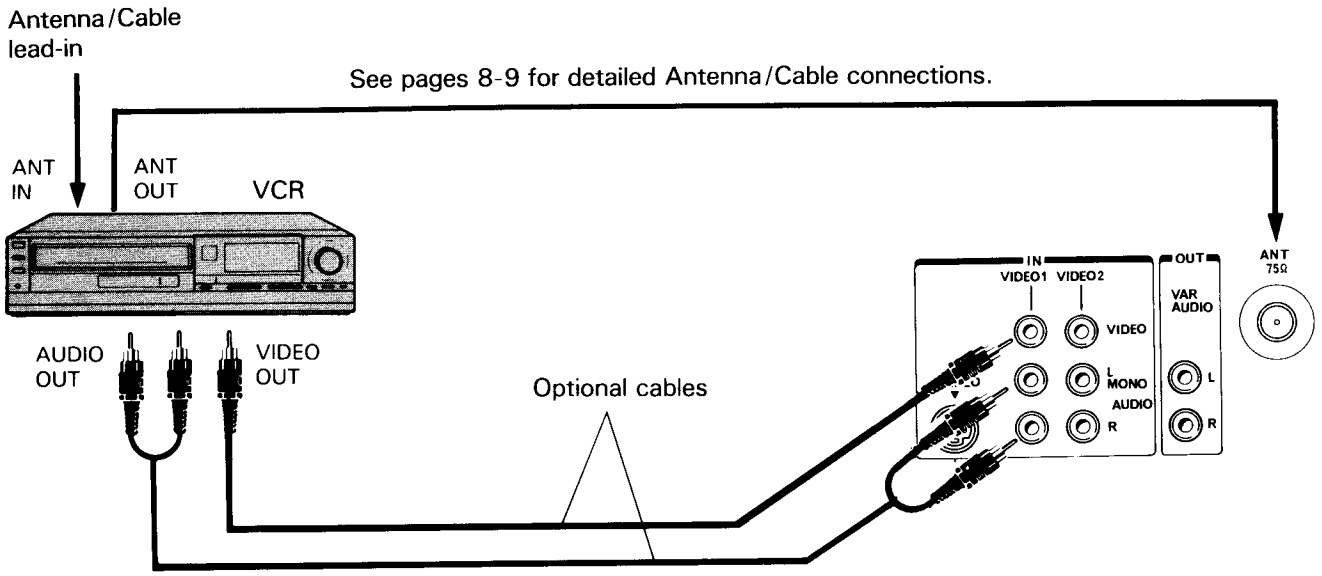
⑤ **VARIABLE AUDIO OUTPUT Jacks** — feed volume-controlled stereo audio out from whatever is displayed on the screen, allows connection of audio amplifier and lets you adjust sound level with TV's remote. Connection details are on page 43.

⑥ **EXTERNAL SPEAKER Terminals** — provide for direct connection of external speakers. Connection details are on page 44.

⑦ **MAIN SPEAKER Switch** — lets you turn off TV's built-in speakers so that sound will instead come through speakers connected to EXTERNAL SPEAKER terminals. See page 44 for details.

CONNECTING STANDARD VCR

Connect VIDEO 1 or VIDEO 2 jacks to the video and audio output jacks of a VCR, Video Disc Player, etc. for playback of video material. The material being played back on the video equipment can be viewed on the TV screen.

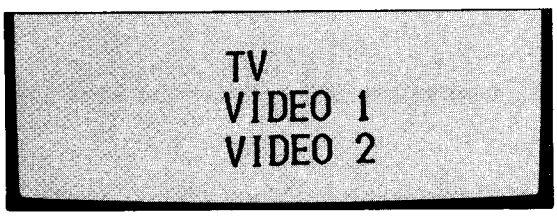


SELECTING VIDEO SOURCES

To operate your TV and video equipment properly, refer to the instructions furnished with the video equipment.

1 Turn the TV set and VCR (or VDP) ON.

2 Press the TV/VIDEO button on the Remote Control or on the TV set to select the VIDEO 1 mode:
Each time you press the button, "TV", "VIDEO 1" or "VIDEO 2" mode will be selected in order.
The selected mode will be displayed in magenta.



Note: The TV/VIDEO button on the TV set will function as the ADV button while any of four menu displays (PICTURE, AUDIO, SET UP or OPTION) is on the screen.

3 Push the VIDEO 1 SELECT button on the TV set to the inner position (▬) to select the Rear "VIDEO 1".

▬ ..... Inner position for Rear "VIDEO 1".
▮ ..... Outer position for Front "VIDEO 1".

Normally set this button in the inner position.

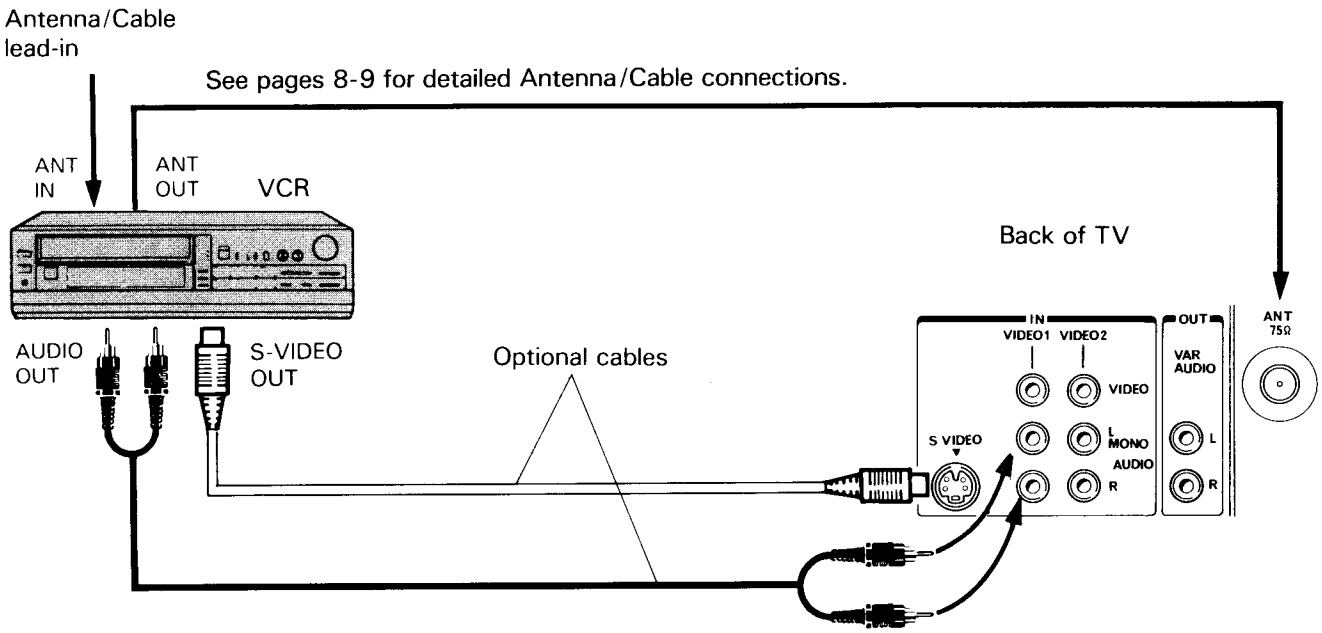
4 Operate your VCR (or VDP) normally.

Notes:

- The VIDEO 2 inputs can also be used for connecting 2nd video equipment with video/audio outputs. To view the video sources from the VIDEO 2 jacks, select the VIDEO 2 mode by pressing the TV/VIDEO button.
- When using monaural sound equipment, connect its AUDIO OUT to the L/MONO jack on the TV set.

CONNECTING VCR WITH S-VIDEO CONNECTOR

If you connect a VCR with an S-VIDEO connector to the "S-VIDEO" connector on the back of the TV, you must also connect the audio cables to the AUDIO jacks of "VIDEO 1" inputs on the back of the TV. The S-Video cable supplies video signal only. Audio signals are separate.



SELECTING VIDEO SOURCES

1 Turn the TV set and VCR ON.

2 Select the VIDEO 1 mode by pressing the TV/VIDEO button on the Remote Control or on the TV set.

3 Push the VIDEO 1 SELECT button on the TV set to the inner position (▬).

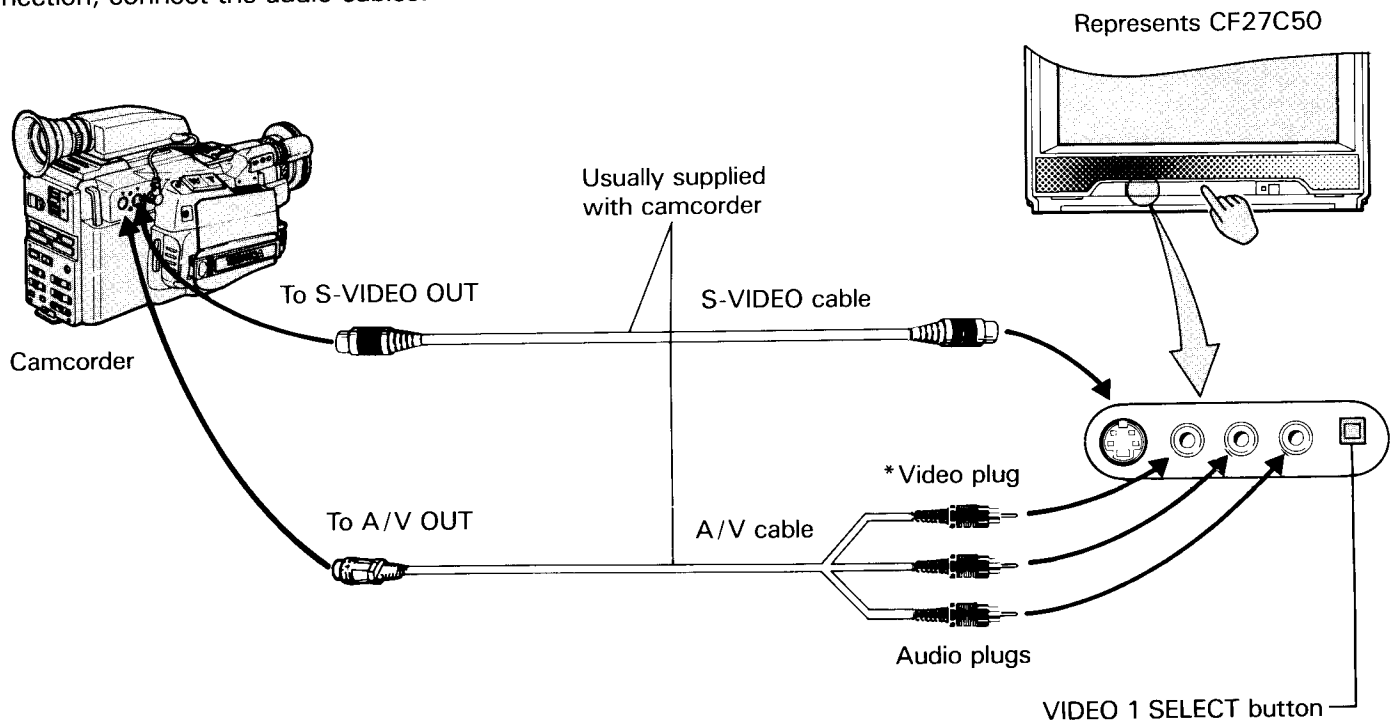
4 Operate your VCR normally.

Notes:

- When using monaural sound VCR, connenct its AUDIO OUT to the L/MONO jack on the TV set.
- Do not connect video equipment to both the "S-VIDEO" and "VIDEO" of VIDEO 1 terminals at the same time.
- The S-VIDEO terminal accepts SEPARATED Luminance/Chrominance (Y/C) signals conforming to the NTSC standard.

CONNECTING CAMCORDER

This connection allows you to play back tapes in the camcorder and watch them on the TV.
If you have an S-VIDEO camcorder, connect the S-VIDEO cable to the "S-VIDEO" jack of the Front "VIDEO 1" inputs. If you have a standard camcorder, connect the video cable to the "VIDEO" jack. With either video connection, connect the audio cables.



SELECTING VIDEO SOURCES

To operate your TV normally, see instructions supplied with the connecting camcorder.

1 Turn the TV set and the camcorder ON. (The camcorder is in the VIDEO position.)

2 Select the VIDEO 1 mode by pressing the TV/VIDEO button on the Remote Control or on the TV set.

3 Push the VIDEO 1 SELECT button on the TV set to the outer position (■).

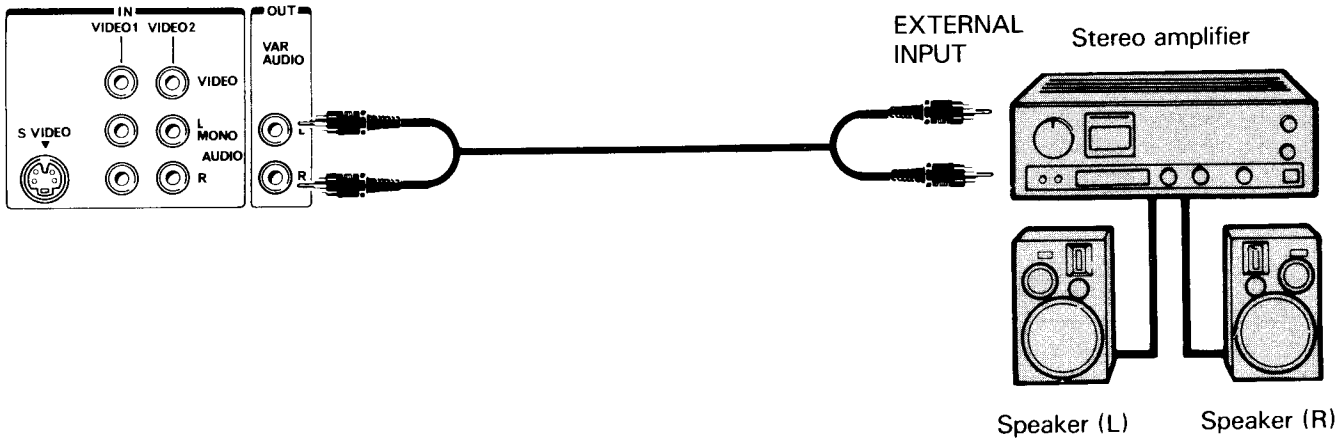
4 Operate your camcorder normally.

Notes:

* When the S-VIDEO cable is connected to the "S-VIDEO" input, the Video plug does not have to be connected.
- When using monaural sound camcorder, connect the Audio plug to the L/MONO jack.

CONNECTING AUDIO AMPLIFIER

Connect the VARiable AUDIO OUT jacks to the external input jacks on the stereo amplifier. You will be able to change and mute volume with the TV's remote control. You will also be able to control bass, treble and balance functions.



OPERATION

1 Turn the TV set and stereo amplifier ON.

2 Adjust the VOLUME control on the TV for a moderate listening level.

3 Disconnect the built-in speakers following the instructions below.

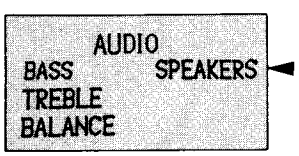
4 Adjust the volume control on the stereo amplifier for a moderate listening level.

5 Control of the audio can now be done using the audio function buttons (VOLUME, MUTE, BASS, TREBLE and BALANCE) on the TV's remote control.

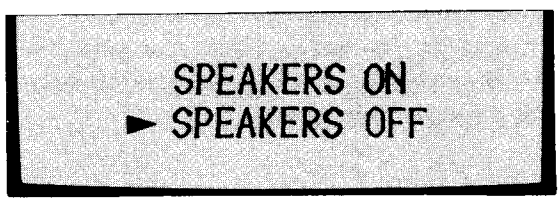
TO DISCONNECT THE BUILT-IN SPEAKERS

1 Press the AUDIO button on the Remote Control or the MENU button on the TV set to display the AUDIO menu shown below on the screen.

Repeatedly press the AUDIO button or the ADV button on the TV set until "SPEAKERS" is displayed in magenta.



2 Press the + or − button to call up the SPEAKERS ON/OFF mode on-screen display shown below. Each time you press the button, "ON" mode and "OFF" mode alternate.



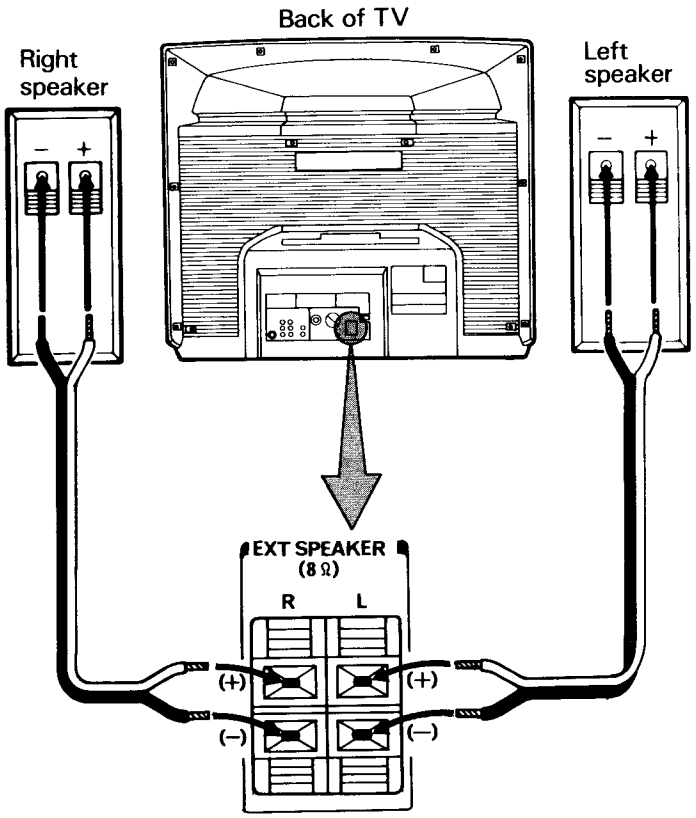
Press either button until "SPEAKERS OFF" is displayed in magenta.
The built-in speakers have now been disconnected.

To resume the sound, select "SPEAKERS ON".

CONNECTING EXTERNAL SPEAKERS (only for CF32C50)

You can connect speakers to the EXTERNAL SPEAKER terminals on the TV set to enhance sound from the TV.

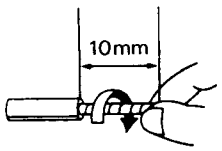
Note: Before connecting the external speakers, turn off your TV set.



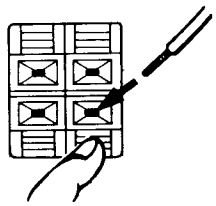
1 Connect speaker leads

While pressing the button, insert the wire into the hole as shown below, and then release the button.

Pull firmly on the wire to make sure it is secure.



Twist wire core.



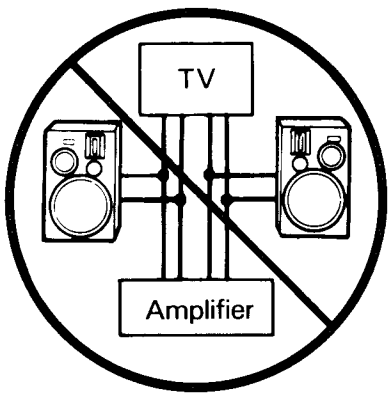
Note: Be sure to connect the Right speaker to the R (+) and (–) and the Left speaker to the L (+) and (–).

2 Set the MAIN SPEAKER switch

Push the switch to "EXT" side (left). The built-in speakers are disconnected.

CAUTIONS:

- Do not connect external speakers to more than one audio source at a time. If you connect the same speaker system to both the TV and the amplifier, you will damage your equipment.
- Use only external speakers with an impedance rating of 8 ohms and input power 7W or greater.



CLEANING AND CARE

WARNING: TV sets use High Voltage. Do not try to remove the cabinet back. Refer servicing to qualified service personnel.

■ To clean the TV screen:

1. First remove the plug from the power outlet to avoid possible shock hazard.
2. Use a clean cellulose sponge or chamois cloth dampened with a solution of mild detergent and warm water to clean TV screen and trim. Do not use too much water on the TV screen.
3. Remove any extra moisture with the same cloth or a dry one.

■ To maintain the finish and appearance of the cabinet, polish it from time to time with a quality furniture polish.

Note: Never use strong solvents such as thinner, benzene or other chemicals on or near cabinet, as they might damage the finish of the cabinet.

SPECIFICATIONS

TELEVISION SYSTEM:	NTSC standard
CHANNEL COVERAGE:	VHF; 2 through 13 UHF; 14 through 69 Cable TV; mid band (A-8 through A-1, A through I) super band (J through W) hyper band (AA through ZZ, AAA, BBB) ultra band (65 through 94, 100 through 125)
POWER SOURCE:	120V AC, 60Hz
POWER CONSUMPTION:	CF27C50; 102W (average) CF30C50; 111W (average) CF32C50; 105W (average)
AUDIO POWER:	CF27C50; 5W CF30C50; 5W CF32C50; 7W
SPEAKER TYPE:	CF27C50; Two 2-1/2″×4-3/4″ oval CF30C50; Two 2-1/2″×4-3/4″ oval CF32C50; Two 3-1/4″×4-3/4″ oval
VIDEO/AUDIO TERMINALS:	S-VIDEO INPUT Y-INPUT: 1Vp-p, 75 ohm, negative sync. C-INPUT: 0.286Vp-p (burst signal), 75 ohm VIDEO 1/VIDEO 2 INPUT VIDEO: 1Vp-p, 75 ohm, negative sync. AUDIO: 150mVrms. (30% modulation, 47k ohm) VARIABLE AUDIO OUTPUT 0~350mVrms. (30% modulation, 4.7k ohm) EXTERNAL SPEAKER TERMINALS (only for CF32C50) Accepts speakers of impedance 8 ohm, input power 7W or greater.
DIMENSIONS:	CF27C50; Width 26-47/64″ (679mm) Height 27-47/64″ (603mm) Depth 23-27/64″ (595mm) CF30C50; Width 29-17/32″ (750mm) Height 27-9/64″ (689mm) Depth 22-11/64″ (563mm) CF32C50; Width 33-15/64″ (844mm) Height 27-41/64″ (702mm) Depth 22-41/64″ (575mm)
WEIGHT:	CF27C50; 88.8lbs (40.3kg) CF30C50; 115.5lbs (52.5kg) CF32C50; 133.6lbs (60.5kg)
SUPPLIED ACCESSORIES:	Remote Control with 4 size "AAA" batteries Antenna adapter

Design and specifications are subject to change without notice.

BEFORE CALLING SERVICE PERSONNEL

Before calling service personnel, please check the following chart for a possible cause of the problem you are experiencing. A minor adjustment on your part may eliminate the problem and restore your TV reception.

Symptoms	Check	Adjustments
● No picture, no sound	● Be sure power cord is plugged in. ● May be station trouble. ● Check antenna connections. ● Check antenna for broken wires.	● Press POWER button. ● Try another channel.
● No UHF, VHF OK	● Be sure TV CABLE function is in "TV" mode.	
● No sound, picture OK	● May be station trouble. ● Check if SPEAKER ON/OFF function (page 43) or MAIN SPEAKER switch (page 44) is properly set.	● Try another channel. ● Adjust VOLUME.
● Poor sound, picture OK	● May be station trouble. ● Check antenna connections. ● May be local interference from appliance.	● Try another channel. ● Adjust VOLUME. ● Adjust BASS, TREBLE, or BALANCE control. ● Re-orient antenna.
● Poor picture, sound OK Snowy picture Lines in picture Distorted picture Weak picture	● May be local interference from appliance. ● Check antenna connections. ● Check antenna for broken wires. ● May be station trouble.	● Try another channel. ● Adjust BRIGHTNESS. ● Adjust CONTRAST. ● Adjust SHARPNESS. ● Re-orient antenna.
● Poor reception of broadcast channels	● Check antenna connections. ● Check antenna for broken wires. ● If VCR is connected, check TV/VCR button.	● Try another channel. ● Re-orient antenna.
● Unable to select a certain channel with CHANNEL ▲/▼ buttons	● That channel may be locked out with CH LOCK function (page 35).	
● Cannot get two channels in PIP	● VCR must be connected to "VIDEO 1" or "VIDEO 2" jacks (page 29).	
● Multiple images (ghosts)	● May be station trouble. ● Check antenna connections.	● Try another channel. ● Re-orient antenna.
● Poor color or No color	● May be station trouble. ● Check antenna connections. ● Check antenna for broken wires. ● May be local interference from appliance. ● Check if station is broadcasting in color.	● Try another channel. ● Re-orient antenna. ● Adjust TINT. ● Adjust COLOR.
● Weak and noisy stereo program	● Check antenna connections. ● Check antenna for broken wires.	● Re-orient antenna. ● Try pressing MTS button in MONAURAL mode.
● No stereo or SAP sound from a known MTS broadcast	● Check if MTS button is properly set.	
● Remote control does not work	● Check if CABLE, VCR or TV button is properly set. ● Be sure power cord is plugged in. ● Check battery in Remote Control.	● Change batteries.

LIMITED WARRANTY

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty
TACP and THI warrant this product and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP and THI will repair a defective product or part, without charge to you.

Authorized TACP/THI Service Station personnel will come to your home when warranty service is required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the Authorized TACP/THI Service Station for repair and returned to your home at no cost to you.

Limited Two (2) Year Warranty of Picture Tube
TACP and THI further warrant the picture tube in this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, TACP and THI will replace a defective picture tube without charge to you, except that if a defective picture tube is replaced after one (1) year from the date of the original retail purchase, you pay labor charges involved in the replacement.

Owner's Manual and Registration Card
You should read this owner's manual thoroughly before operating this product. You should also insure that your name and address are on file as owners of a TACP/THI product by completing and mailing the enclosed registration card within ten days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP/THI to provide you with better customer service and improved products. Failure to return the card will not affect your rights under this warranty so long as you retain other proof of purchase such as a bill of sale.

Your Responsibility
The above warranties are subject to the following conditions:
(1) You must retain your bill of sale or provide other proof of purchase.
(2) All warranty servicing of this product must be made by an Authorized TACP/THI Service Station.
(3) These warranties are effective only if the product is purchased and operated in the U.S.A.
(4) Labor service charges for set installation, set up, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
(5) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have been altered or modified without authorization of TACP/THI or to damage to products or parts thereof which have had the serial number removed, altered, defaced or rendered illegible.

Step-By-Step Procedures—How to Obtain Warranty Service

If, after following all of the operating instructions in this manual and checking the section "BEFORE CALLING SERVICE PERSONNEL", you find that service is needed:
(1) Contact one of the TACP/THI Service Centers listed below for warranty service or call the TACP toll free number **800-631-3811** within thirty (30) days after your find a defective product or part to find the nearest TOSHIBA Authorized Service Station or authorized TOSHIBA Dealer.
(2) Please present your bill of sale or other proof to the Authorized Service Station. According to the repair required, the service will be made in your home or at the nearest service center.
(3) If you have any question about service, please contact one of the following TACP/THI Service Centers:

IN THE CONTINENTAL UNITED STATES
Should your unit require service, Call

NORTHEAST	MIDWEST	WEST	SOUTHEAST	SOUTHWEST	HAWAII
82 Totowa Road, Wayne, New Jersey 07470	1010 Johnson Drive, Buffalo Grove, Illinois 60089-6900	5490 E. Francis St., Ontario, California 91761	6115 Jimmy Carter Blvd., Suite C2, Norcross, Georgia 30071-4607	1421 Champion Drive, Suite 304, Carrollton, Texas 75006	327 Kamakee Street, Honolulu, Hawaii 96814

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IN NO EVENT SHALL TACP OR THI BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation may not apply to you.

No person, agent, distributor, dealer, service station or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP and THI arising under this warranty or under any statute, or law of the United States or any state thereof, is hereby limited to one year from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law. Some states do not permit limitation of the time within which you may bring an action beyond the limits provided by state law so the above provision may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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TOSHIBA AMERICA CONSUMER PRODUCTS, INC.

HEAD OFFICE/82 TOTOWA ROAD, WAYNE, NEW JERSEY 07470
FACTORY SERVICE CENTERS/NORTHEAST: 82 TOTOWA ROAD, WAYNE, NEW JERSEY 07470
MIDWEST: 1010 JOHNSON DRIVE, BUFFALO GROVE, ILLINOIS 60089-6900
WEST: 5490 E. FRANCIS ST., ONTARIO, CALIFORNIA 91761
SOUTHWEST: 1421 CHAMPION DRIVE, SUITE 304 CARROLLTON, TEXAS 75006
SOUTHEAST: 6115 JIMMY CARTER BLVD., SUITE C2, NORCROSS, GEORGIA 30071-4607

TOSHIBA HAWAII, INC.

HEAD OFFICE/327 KAMAKEE STREET, HONOLULU, HAWAII 96814, U.S.A. PHONE: (808) 521-5377

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